

The Mystical stories of Mahagurutech

# MAHASYA

2024



**MAHAGURU INSTITUTE OF TECHNOLOGY**

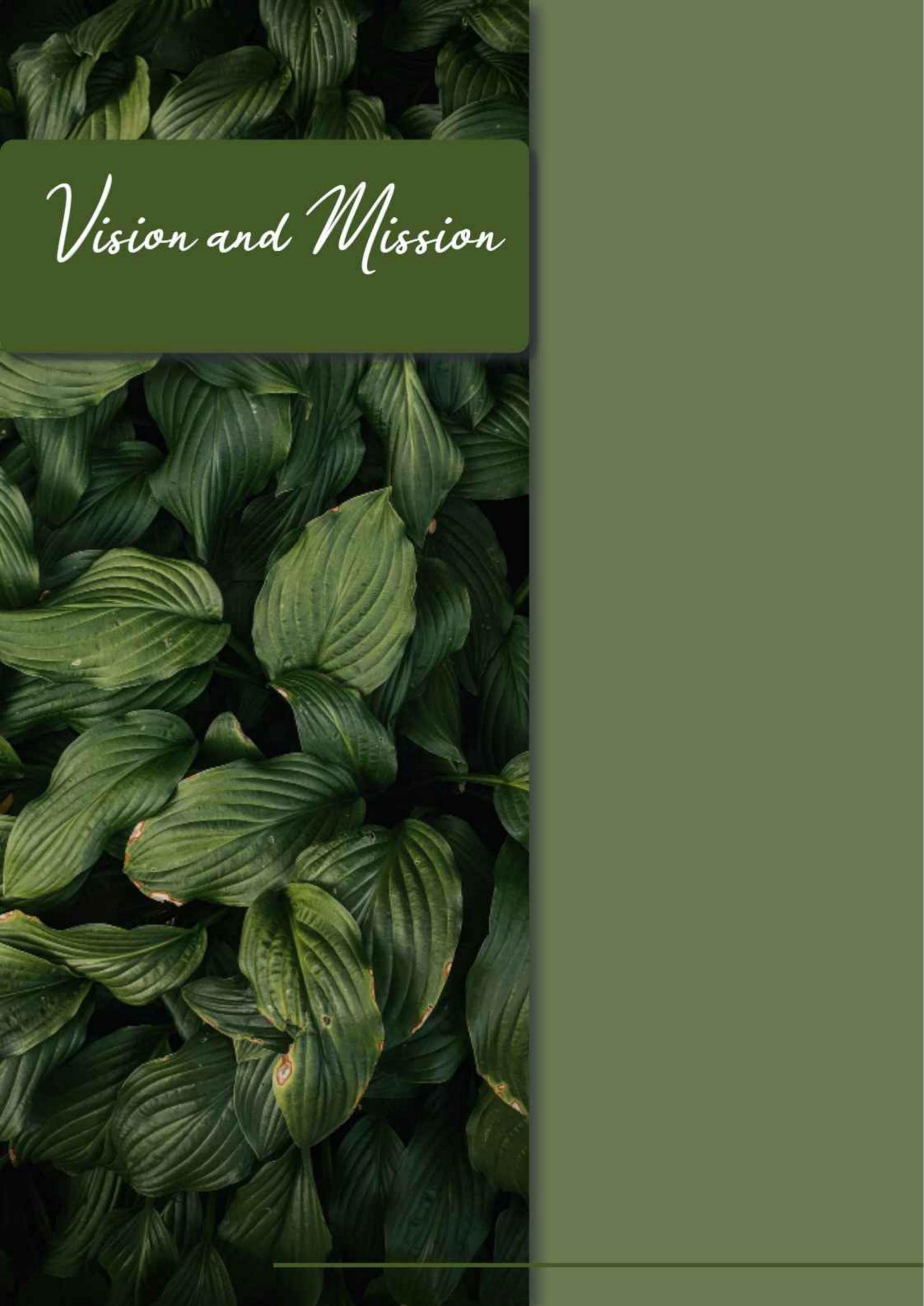
Kattachira, Pallickal PO, Kayamkulam, Kerala 690503

[www.mahagurutech.ac.in](http://www.mahagurutech.ac.in)



Become enlightened  
through Education  
Become strengthened,  
through Organization  
Become prosperous,  
through Hard work

~Sree Narayana Guru~



# *Vision and Mission*

## *vision*

*To become a globally recognized centre of excellence for science, technology & engineering education, committed to quality teaching, learning and research which will promote leadership, job creation, social commitment and service to nation building.*

## *mission*

*To create and disseminate knowledge in recent technologies and drive economic development.*

*To provide world-class environment for faculty and students to prepare them for addressing the engineering challenges and opportunities.*

*Aims to transform the learners into efficient engineers and facilitate socially responsive research, innovation and entrepreneurship.*

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# Dr. A. M. Gopalan



# MESSAGE FROM CHAIRMAN

Dear Readers,

It is with tremendous pride and contentment I am addressing you all through the pages of Mahasya. I am greatly moved by the tireless efforts of the editorial team in creating this beautiful compilation of the achievements, and creativity of our college community. They spent there valuable time in creating this distinctly informative documentation of our college activities of the past year.

I would like to extend my appreciation to all the hard-working, sincere and kind-hearted faculties for their continued efforts in imparting quality education to the enthusiastic and budding engineers of this college. Their responsibility is paramount in producing promising and committed professionals who will prove to be great assets to the society.

No educational institution will function smoothly without the pillar of support provided by all the non-teaching staffs. Their responsibilities are no less important than that of the faculties in shaping a bright future for the students who join the college with great hopes. They cater for the flawless management of the institution in a peaceful manner.

As the chairman of this college I will do everything in my power to make this institution successful, prosperous and prestigious. Every step would be taken keeping in mind the successful future of all the students who have kept their unwavering faith in this institution and to ensure the placement of all the rising professionals in leading positions. All the state-of-the-art equipments and facilities of the institutions will be kept upto the latest technological scenarios.

Once again I appreciate all those who have contributed towards the creation of this wonderful magazine. Also, I extend my warm appreciation to all the students, faculties and staffs of the college who are marvelously helpful in successfully running this institution.

Dr. A.M. Gopalan  
Chairman

# MESSAGE FROM GENERAL SECRETARY



" Scientists study the world as it is. Engineers create the world that never has been. "

**D**ear Students, Faculties and Staffs,

As we approach another milestone in the journey of Mahaguru Institute of Technology, I am filled with a sense of pride and excitement for what lies ahead. Our college magazine Mahasya stands as an evidence to the skill, commitment, and originality that characterize our institution. This year amidst the challenges and uncertainties our students have continued to excel in academics, research and extracurricular activities. Their achievements along with the relentless efforts of our faculty and staffs truly exemplify the spirit of our college.

I am heartened by the contribution of your unique perspectives, experiences, and insights to this year's magazine. Let us celebrate our successes, share our stories and inspire each other to reach greater heights. Together let us make this edition of the college magazine a true reflection of the vibrant and dynamic community.

Sri. Sukumaran K.

# MESSAGE FROM TREASURER

" The roots of education  
are bitter. But the fruit  
is sweet "



**D**ear Readers,  
I hope this message finds you well. On behalf of Mahaguru Institute of Technology, I am delighted to extend our heartfelt appreciation to the upcoming edition of Mahasya. As the Treasurer of our esteemed institution, it brings me immense joy to support the dissemination of knowledge and ideas through this esteemed publication. Mahasya has continually been a beacon of enlightenment, fostering intellectual discourse and promoting innovative thinking within our community and beyond. Furthermore, we would like to express our gratitude to the editorial team and all contributors for their dedication and hard work in making each edition a resounding success. We eagerly anticipate the release of the upcoming edition. Wishing you continued success in your endeavors.

Sri. S. Baburajan

# MESSAGE FROM ASSISTANT SECRETARY



" Education is the passport to the future, for tomorrow belongs to those who prepare for it today"

**D**ear Readers,

As we move forward into another exciting year filled with innovation, growth, and learning, Mahasya Magazine continues to be a beacon of knowledge and inspiration for our community. Through its insightful articles, interviews, and features, Mahasya not only showcases the remarkable achievements within our institute but also serves as a platform to share valuable insights and perspectives from our esteemed faculty and students. At Mahaguru Institute of Technology, we are committed to fostering an environment of academic excellence, research innovation, and holistic development. Through our cutting-edge programs, state-of-the-art facilities, and dedicated faculty, we strive to empower our students to become leaders and changemakers in their respective fields. I sincerely appreciate the editorial team, contributors, and readers of Mahasya for their support and dedication. Together, let us continue to celebrate the spirit of learning and innovation that defines Mahaguru Institute of Technology.

Sri. V. Sadasivan

# MESSAGE FROM GOVERNING BODY MEMBER

"In the end, some of your  
greatest pains become  
your greatest strengths"



Dear Students, Faculties and Staffs,

It is with profound delight and deep-seated pride that I extend my heartfelt greetings to all of you through the esteemed pages of our college magazine. As a privileged member of the governing body of our revered engineering college, I am continually invigorated by the unwavering dedication and remarkable accomplishments of our community.

Our college stands tall as a bastion of excellence in engineering education, owing to the collective efforts and unwavering commitment of our students, faculty, and staff. In the face of unprecedented challenges, our college has displayed remarkable resilience, adaptability, and an unyielding resolve towards academic and personal growth. As we traverse the intricate landscape of the modern era, we must embrace innovation, foster collaboration, and cultivate a spirit of perpetual learning.

I implore every one of you to utilize this platform as a conduit for sharing your myriad experiences, invaluable insights, and lofty aspirations. Let us together revel in our triumphs, glean wisdom from our trials, and ignite within each other an indomitable spirit to strive for excellence in every facet of our endeavors. May this year's rendition of the college magazine stand as a living testament to the indomitable spirit and resounding vigor of our community.

Sri. Sasidharan Achuthan

# MESSAGE FROM GOVERNING BODY MEMBER



"It is never too late to be what you might have been"

**D**ear Esteemed Readers,

It is with great pleasure and pride that I extend my warmest greetings to all the members of our esteemed Mahasya community. At Mahaguru Institute of Technology, we strive to cultivate an environment where innovation, excellence, and creativity flourish. Our institution stands as a beacon of knowledge and enlightenment, where students are nurtured to become the leaders and pioneers of tomorrow's world. As a member of the governing body, I am privileged to witness the remarkable achievements and contributions of our students, faculty, and staff members. Each day, we are inspired by their dedication, passion, and commitment to pushing the boundaries of knowledge and making a positive impact on society. I would like to take this opportunity to express my gratitude to the entire Mahasya team for their tireless efforts in showcasing the incredible work being done within our institution. Your commitment to excellence and your dedication to sharing our stories with the world are truly commendable. As we look towards the future, let us continue to uphold the values of integrity, excellence and innovation that define Mahaguru Institute of Technology. Together, we can achieve great things and make a lasting impact on the world.

Sri. Thampi Parameswaran

# MESSAGE FROM GOVERNING BODY MEMBER

" Education is the kindling of a flame, not the filling of a vessel"



**D**ear Students, Faculties, and Staffs,  
Welcome to the newest edition of our college magazine Mahasya. It is a privilege to connect with you all through these pages. As a member of the governing body, I am constantly inspired by the unwavering dedication and remarkable achievements of our entire community. This past year has been a testament to our colleges resilience. We have faced challenges head on adapting and innovating to ensure continued academic and personal growth for everyone. As we navigate the ever-evolving world of engineering, fostering collaboration and a spirit of lifelong learning is more important than ever. We call upon everyone to submit articles, personal reflections or creative works. Let us celebrate our triumphs, learn from our experiences and ignite a collective spirit of excellence in all we do. This year's magazine promises to be a vibrant testament to the indomitable spirit and resounding vigor of our college community.

Sri. N. Sunil Kumar

# MESSAGE FROM GOVERNING BODY MEMBER



**"If you want to be the best,  
you have to do things other  
people aren't willing to do"**

**D**ear Readers,

As a member of the governing body of Mahaguru Institute of Technology, I am delighted to extend my warmest greetings to every one of you through the platform of Mahasya. Our college stands at the forefront of innovation and excellence in education. Our commitment to nurturing talent, fostering creativity and instilling values of integrity and leadership is unwavering. It is through this dedication that we continue to produce outstanding individuals who not only excel in their respective fields but also contribute positively to society. In today's fast-paced world, where technological advancements are shaping our future at an unprecedented rate, we must equip our students with the necessary skills and knowledge to thrive in this ever-evolving landscape. We take pride in providing advanced programs, modern facilities and a vibrant learning atmosphere that enables our students to emerge as the leaders and innovators of the future. As we embark on this journey of growth and progress, I urge you to join hands with us in our mission to redefine the boundaries of excellence in education. Together, let us inspire, innovate, and create a brighter future for generations to come. Thank you for your unwavering support and dedication to the ideals of Mahaguru Institute of Technology. We look forward to continuing this journey of success with you by our side.

**Sri. South Indian Vinod**

# MESSAGE FROM ACADEMIC DIRECTOR

" Whatever you choose for a career path, remember the struggles along the way are only meant to shape you for your purpose "



**E**steemed Readers,

It's a delight to witness the vibrant spirit of creativity and intellect that thrives within our college community. As the Academic Director, I am constantly inspired by the ingenuity and passion displayed by our students, faculty, and staff. "Mahasya," our college magazine, serves as a testament to the depth of talent and the diversity of ideas present within our institution. It provides a platform for expression, exploration, and celebration of the myriad voices that contribute to our academic landscape. In the pages of "Mahasya," you will find not only insightful reflections on our academic endeavors but also glimpses into the rich tapestry of experiences that shape our community. From thought-provoking essays to captivating artwork, each contribution adds a unique hue to the canvas of our collective journey. I encourage all members of our college family to actively engage with "Mahasya". Together, let us continue to foster a culture of creativity, inquiry, and collaboration that defines our institution. I extend my heartfelt gratitude to the editorial team for their dedication and vision in bringing "Mahasya" to life. May this publication be a luminary of motivation and a reflection of our shared commitment to excellence.

Sri. Manu M. Rajan

# MESSAGE FROM PRINCIPAL



**"Engineers like to solve problems. If there are no problems handily available, they will create their own problems."**

**D**ear Students, Faculties and Staffs,

It gives me immense pleasure to welcome you to yet another edition of our MIT college magazine Mahasya. Our institution's vision, we are committed to shaping future leaders and innovators through cutting-edge research and holistic education. As a testament to our commitment to quality education, we are proud to be accredited by both NAAC and NBA, ensuring excellence in every facet of our institution. This publication serves as a testament to the talent, creativity, and dedication present within our vibrant community. As we delve into the pages of this magazine, we are reminded of the countless hours of hard work, innovation, and collaboration that have gone into its creation. From ground breaking research to awe-inspiring projects, each article, photograph, and design element reflects the ingenuity and passion of our students and faculty. I would like to extend my heartfelt gratitude to everyone who has contributed to making this magazine a reality—the editors, writers, photographers, designers, and all those who have lent their expertise and support along the way. Your commitment to excellence is truly commendable. As we celebrate the achievements and milestones captured within these pages, let us also look towards the future with optimism and determination. May this magazine inspire us to reach greater heights, push the boundaries of knowledge, and make a positive impact in our respective fields and communities. I encourage everyone to take the time to explore its contents and appreciate the remarkable talent that lies within our midst. Wishing you all continued success and fulfilment in your academic and professional endeavours.

**Dr. V. Suresh Kumar**

# MESSAGE FROM VICE PRINCIPAL

"Perfection is achieved, not when there is nothing more to add, but when there is nothing left to take away."



**D**ear all,  
As we come together to celebrate another year of achievement, growth, and success, it is my honor to address you through the pages of our College Annual Magazine "MAHASYA 2024". This publication serves as a testament to the collective dedication, passion, and spirit of excellence that defines our institution. As we turn the pages of this year's Magazine, let us celebrate our achievements, honor our traditions, and reaffirm our commitment to excellence in all that we do. Together, let us continue to create a legacy of excellence that will inspire generations to come. I extend my deepest gratitude to our faculty and staff for their unwavering commitment to academic excellence and student success. Your intellectual curiosity, creativity, and leadership are the driving force behind our collective success, and I have no doubt that you will continue to achieve great things in the years to come. As we embark on another year of academic excellence and discovery, let us remain united in our shared pursuit of knowledge, truth, and social responsibility. Together, let us continue to inspire, innovate, and make a positive impact on the world around us.

Dr. Manju J.

# MESSAGE FROM DEAN ACADEMICS



"The problem in this business isn't to keep people from stealing your ideas it's making them steal your ideas"

I'm pleased to know that the college magazine Mahasya is being published. The magazine continues to explore new areas and awareness among students. The editorial team of our college has put on tremendous efforts to showcase the milestones of the college and achievements of students year after the year. The major challenge for today's engineering educational institutions is to accommodate the ever varying aspirations of the younger generation because of increasingly changing demand and development in industries. MIT combines excellence in teaching theoretical principles and engineering design concepts with practical hands on experience to foster technical proficiency and communications skills. We focus on our students by providing them with a world, class outcome based education and hands, on experience through teaching, learning process, research, training and student forum activities etc. To keep abreast with the latest knowledge, we encourage the faculty members to organize or to participate in faculty development programs, conferences, workshops etc. There is continuous check on the implementation of planned academic activities because we believe that with designed measures and timely execution, we will be able to come out with desired results in grooming our future generation for employment and for higher studies in India and abroad. I'm sure that our students would continue to prove their mettle and make us proud by their achievements.

Dr. Arun Elias

# MESSAGE FROM HOD ECE

" Any idiot can build a bridge that stands, but it takes an engineer to build a bridge that barely stands. "



**D**ear Students, Faculties and Staff Members,

I take great delight in sending my best wishes to each and every one of you through the pages of Mahasya, our respected campus magazine. It is a pleasure for me to take part in the celebration of our group's accomplishments and efforts as the Head of Department. You'll discover a reflection of our department's commitment, enthusiasm, and inventiveness in these pages. Each contribution from ground-breaking research to life-changing educational opportunities is evidence of the faculty, staff, and students steadfast dedication. It is critical that we don't waver in our quest of excellence as we negotiate the dynamic environment of higher education. By working together, being curious and pursuing information nonstop, we can keep pushing the envelope of what is conceivable and motivate the following generation of innovators and leaders. I invite you to peruse the various viewpoints and ideas presented in these pages and to join us in honoring the vibrant tapestry of skill and inventiveness that characterizes our college. Let's embrace the excellent spirit and keep making significant contributions to both our local community and the larger international community together. I appreciate your unwavering commitment and assistance.

Prof. Ratheesh Kumar S.

# MESSAGE FROM HOD S & H



"The human foot is a masterpiece of engineering and a work of art."

**D**ear Students, Faculties, and Staffs,

It is a pleasure to address you through the pages of our esteemed college magazine Mahasya. As the Head of the Science and Humanities Department, I am delighted to witness the myriad accomplishments and contributions of our dynamic community. Our college magazine serves as a testament to our collective brilliance, creativity, and scholarly pursuits. Within its pages, we celebrate our triumphs, share our scholarly pursuits, and explore diverse perspectives on a multitude of subjects. I encourage each of you to actively participate in shaping the magazine's content by sharing your unique insights, experiences, and perspectives. Let us continue to inspire and support one another as we strive for academic excellence and personal growth. A heartfelt appreciation goes to the dedicated editorial team for their tireless efforts in bringing this magazine to fruition. Their commitment to crafting engaging content and ensuring the magazine's quality is truly commendable. As we embark on another year, let us cherish the opportunities for learning, collaboration, and camaraderie that our college offers. Together, let us uphold the values of integrity, inclusivity, and excellence that define our institution. Wishing you all continued success and fulfillment in your academic pursuits.

Prof. K. S. Sasi

# MESSAGE FROM HOD CE

*" When you want to know how things really work, study them when they're coming apart. "*



**E**steemed Readers,

This is a proud moment for Mahaguru Institute of Technology as the students release the next edition of the college magazine Mahasya. I have had the opportunity to witness the enthusiasm with which the editorial team has gone about with their work. They have ensured an overall participation and contribution of the student and faculty community of the college and the outcome is there for everyone to see. I congratulate all the students who helped to make this venture a success. Looking forward to the future editions of Mahasya in the coming years as well. All the best.

Prof. Priya Grace Itti Eipe

# MESSAGE FROM HOD EEE



"Engineering is not only study of 45 subjects but it is moral studies of intellectual life."

**D**ear Students, Faculties, and Staff Members,

It brings me immense joy and pride to address you through the esteemed platform of our college magazine, Mahasya. As the Head of the Department of Electrical and Electronics Engineering "EEE". I am honored to witness the relentless pursuit of knowledge and excellence exhibited by our department. In the realm of Electrical and Electronics Engineering, innovation is the driving force behind the progress. Our department has consistently strived to foster an environment that encourages creativity, critical thinking, and problem-solving skills among our students. Through a blend of theoretical knowledge and practical application, we aim to equip our students with the tools necessary to tackle the challenges of tomorrow. Furthermore, I would like to express my appreciation to the faculty members whose dedication and expertise have been instrumental in shaping the minds of our students. Their tireless efforts in teaching, mentoring, and research serves as a beacon of inspiration for all. As we continue our journey towards academic excellence, let us remember the importance of collaboration and teamwork. Together, we can overcome any obstacle and achieve greatness. I encourage all members of the EEE department to actively contribute to Mahasya, sharing your insights, experiences, and achievements. Let's commemorate our achievements, exchange our narratives, and motivate one another to aspire to even greater accomplishments. In closing, I extend my best wishes to everyone for a successful academic year ahead. May we continue to strive for excellence and make our department proud.

Prof. Sarath S.

# MESSAGE FROM HOD CSE

" First rule of engineering  
beware prototypes. Along  
with, avoid anything made  
by an engineer who doesn't  
have all his own fingers. "



**D**ear Students and Faculties,  
I am thrilled to extend my warmest greetings to all of you as we embark on the exciting journey of creating the annual college magazine. I am continually inspired by the passion, innovation, and dedication that our students and faculty bring to our dynamic learning community. The college magazine serves as a vibrant canvas, showcasing the brilliance and creativity of our diverse talents. It is a platform for us to celebrate our achievements, share our knowledge, and inspire one another to reach new heights of excellence. As we leaf through the pages of this magazine, we are reminded of the countless hours of hard work, dedication, and passion that each contributor has poured into their respective pieces. From thought-provoking essays to captivating artwork, from insightful research to inspiring poetry, every submission embodies the essence of our college community. This magazine is more than just a collection of articles and artwork, it is a celebration of our shared experiences, our triumphs, and our challenges. It is a platform for us to come together, to share our stories and to inspire one another to reach greater heights. I would like to extend my heartfelt gratitude to the editorial team for their tireless efforts in bringing this publication to fruition. Your dedication and commitment have ensured that our collective voice is heard and cherished. To all the contributors, I offer my sincerest appreciation for your contributions. Your creativity, talent, and passion are what make this magazine truly special. Thank you for sharing your gifts with us and for enriching our college community with your unique perspectives. As we turn the pages of this magazine, let us take a moment to reflect on the journey that has brought us to this point and to celebrate the achievements that lie ahead. May this publication serve as a source of inspiration and pride for us all. Thank you once again to everyone who has contributed to this magazine, and congratulations on another successful edition.

Prof. Suma S. G.

# MESSAGE FROM HOD ME



"I've never seen a job being done by a five hundred person engineering team that couldn't be done better by fifty people."

**D**ear Readers,

As the Head of the Department of Mechanical Engineering, it gives me immense pleasure to extend my warmest wishes to all those involved in the creation and publication of our college magazine. The college magazine serves as a reflection of our collective creativity, intellect, and passion for knowledge. It is a platform where ideas converge, stories unfold, and talents shine. With each edition, we witness the culmination of hard work, dedication, and innovation from our students and faculty members. This year as we eagerly anticipate the release of the latest issue, I would like to commend the editorial team, and everyone else who has contributed their time and effort to make this publication possible. Your commitment to excellence is truly commendable, and I have no doubt that this edition will be a testament to your talent and perseverance. In the pages of our magazine, may we find inspiration, insight, and a celebration of the diverse perspectives that make our college community so vibrant. Let us continue to embrace the spirit of collaboration and exploration as we explore new horizons and push the boundaries of knowledge. I encourage everyone to immerse themselves in the richness of the content within the magazine and to support each other in our creative endeavors. Together, let us celebrate the culmination of another year of academic achievement and artistic expression. Once again, I extend my heartfelt congratulations to all involved and I eagerly await the unveiling of our latest masterpiece.

**Dr. Manikanda Prabu N.**

# MESSAGE FROM HOD AI & ML

"The trick to having good ideas is not to sit around in glorious isolation and try to think big thoughts. The trick is to get more parts on the table."



**D**ear Students and Faculties,  
I'm pleased to learn of the forthcoming release of the latest edition of MAHASYA from our esteemed college. It's heartening to see the dedication and hard work of the team of staff and student editors culminate into this creative endeavor. In our rapidly evolving world of technology, initiatives like MAHASYA play a crucial role in showcasing our diverse talents and experiences. Let's seize this opportunity to celebrate our collective achievements, share our stories, and inspire one another. I extend my warmest congratulations and best wishes for the success of this edition, and I encourage the continuation of such efforts in the years to come.

Prof. Vivitha Vijay

# MESSAGE FROM EXAM CELL SUPERINTENDENT



**"The test of a good teacher is not how many questions he can ask his pupils that they will answer readily, but how many questions he inspires them to ask him which he finds it hard to answer."**

**D**ear Students,

As I pen down these words for our cherished Mahasya magazine, I am filled with immense gratitude towards every one of you who contributes to the vibrant tapestry of our college community. Your dedication, passion, and diversity enrich our institution in countless ways, making it a beacon of academic excellence and inclusivity. At the heart of our educational philosophy lies the belief that learning is not merely about absorbing information but also about personal transformation. We are committed to providing an environment that nurtures not only intellect but also character, fostering qualities such as critical thinking, creativity, and resilience. Our esteemed faculty members, with their unwavering dedication, ignite the flame of curiosity within you, guiding you toward realizing your full potential. Likewise, our diligent staff members ensure that the wheels of our institution keep turning smoothly, supporting every endeavor and initiative with their expertise and diligence. As we celebrate the achievements of our students, both academic and extracurricular, we are filled with immense pride. Your successes, big and small, are a testament to your hard work and perseverance. We have every confidence that you will continue to shine bright, making significant contributions to our college and beyond. As you embark on your journey beyond these walls, remember the lessons you have learned here, both inside and outside the classroom, will serve as your compass. Embrace challenges with courage, pursue your passions with determination, and always strive for excellence. In closing, I extend my heartfelt wishes to every one of you as you chart your course towards a future filled with promise and possibility. Your presence has enriched our college community in countless ways, and we eagerly anticipate the incredible contributions you will make in the years to come.

**Dr. B. Sasi**

# MESSAGE FROM ADMINISTRATIVE OFFICER

" A good administrator is one who can listen to the needs and concerns of their team and find a way to address them effectively "



**D**ear Readers,  
You are the gifted personalities of the Mahaguru Institute of Technology, where you are imparted with quality assuring education and the breath of Equality, Freedom of Speech, and Fraternity which have been deprived of from most college campuses recently. While some are embarking on an exciting new chapter of life, others are beginning to open a prosperous chapter for their future. As it is a world of competition, we have to traverse many struggles for the existence of the fittest, and hold on to ourselves without faltering in the spin of the wheel of time. As the saying of Sir Thomas Alva Edison, the Nobel laureate who offered more than 2000 discoveries to the world, 50% hard work and 50% perspective, so always be positive, polite, self-esteemed, trustworthy, and respectful to your Parents and Teachers. Your colleagues are not your enemies, respect them. May your imaginations and sweet dreams blossom and adorn your entire life with the fragrance of fresh flowers. Good Luck to all.

Sri. Sarasan T. N.

# MESSAGE FROM CHIEF STAFF EDITOR



" When you are editing you want to be the perfect appreciator, not another writer "

**D**ear Readers,  
It's with immense pride that I welcome you to this edition of MAHASYA, the vibrant literary heaven of Mahaguru Institute of Technology. This issue reflects the tireless efforts of our dedicated team- writers, editors, and designers, who have poured their creativity and passion into crafting a diverse and engaging magazine. As Chief Staff Editor, I've witnessed firsthand the transformative power of MAHASYA. It serves as a platform for amplifying student voices, fostering intellectual discourse, and celebrating artistic expression across various disciplines. Within these pages, you'll encounter a spectrum of content - from thought-provoking articles on current events to captivating stories and stunning artwork. This edition is a testament to the exceptional talent that thrives within our college walls. It's a space where budding engineers can explore their literary side, challenge perspectives, and ignite imaginations. I, the staff editor, take immense pride in facilitating this creative outlet and nurturing the artistic spirit of Mahaguru. Here's to another successful edition of MAHASYA! We encourage you to delve into its pages, be inspired, and perhaps even consider contributing your own unique voice to future issues. Together, let's continue to make MAHASYA a beacon of intellectual and creative exploration at Mahaguru Institute of Technology.

Prof. Amjith S.

# MESSAGE FROM CHIEF STUDENT EDITOR

**"The secret to editing your work is simple you need to become its reader instead of its writer."**



**D**ear Friends,  
It gives us immense joy and satisfaction to finally introduce our own college magazine "MAHASYA". The magazine, I feel, will mirror the creative and innovative ideas of our students. A lot of effort has gone into the making of this issue. We hope you enjoy reading the magazine. The best thing about this issue is that it represents the creative side of our blooming students to something that we think we all need to reconnect with. We are capable of things that we could have been proud of, that can bring one satisfaction. So this time we have made an attempt to bring out the talent concealed within our student community. This issue includes articles, poems, Photography, art-works, a host of other things and so on. Finally, a bouquet of gratitude to everyone who is behind this endeavor. We hope you enjoy reading this issue as much as we have enjoyed making it. Any suggestions or criticism on the magazine would be most welcome.

Alaap S. Nair



# Word From The Team

*Dear Readers,*

*Welcome to the latest edition of our college magazine "MAHASYA", the literary beacon of Mahaguru Institute of Technology. It's with immense pleasure and excitement that we present to you this compilation of literary works, essays, and creative expressions crafted by the talented minds within our engineering community. As students, we often find ourselves engrossed in the realm of equations, circuits, and algorithms. However, amidst the flurry of assignments and exams, it's imperative to nurture our creative spirits. This serves as the canvas where we paint our thoughts, dreams, and aspirations beyond the confines of technical jargon.*

*Within these pages, you'll discover a myriad of voices, each resonating with unique perspectives and experiences. From poignant poetry that tugs at the heartstrings to thought-provoking essays that challenge conventional wisdom, every piece in this magazine reflects the diversity and richness of our collective imagination. We extend our heartfelt gratitude to all the contributors who poured their hearts and souls into their creations. Your dedication and passion have breathed life into this edition, transforming it into a tapestry of emotions and ideas.*

*To our readers, we hope that this magazine sparks inspiration, ignites curiosity, and fosters a sense of community among us. As you delve into its pages, may you find moments of reflection, joy, and enlightenment. Remember, this isn't just a magazine; it's a testament to the power of words and the boundless potential of human expression. Let us continue to write, create, and inspire, for our journey as students extends far beyond the confines of academics.*

*With warm regards,  
Editorial Team`v*



*Prof Amjith S*  
Chief Staff Editor

*Vasishth Sunil*  
S4 AI&ML |  
Associate Layout Designer



*Pavithraganga P Potty*  
S8 ECE | Content Editor



*Nimisha S*  
S8 ECE | Content Editor



*Alaap S Nair*  
S8 EEE | Chief Student Editor



*Bhavana Baiju*  
S6 CSE | Content Editor



*Darsh S Kumar*  
S8 CSE | Chief Designer

*Pranav Gokul*  
S8 EEE | Copywriter



*Keerthana S*  
S6 CSE | Copywriter



*Neha Datta Pradeep*  
S8 CSE | Layout Designer

*Abhilash*  
S8 EEE | Media Editor



*Gopikrishna Pai*  
S4 ME | Media Editor



*Anandhu Prakash*  
S8 EEE | Chief Designer

*Muhammad Vaseem*  
S4 CSE | Sports Editor



*Muhammed Shanu S*  
S4 EEE | Photography Editor

# CONTRIBUTORS

**TEAMMIT**



**CE 2020-24**



**CSE 2020-24**



**ME 2020-24**



**ECE & EEE 2020-24**



**STAFF**



**STAFF**



**FACULTY**



**S & H DEPT**



**NDLI CLUB**



**EDITORIAL TEAM**



The

Senate



*The college senate is the highest power of students in the college. It is a union of students working towards the well-being of students. It acts as a liaison between the faculty and management, and the students. It strives to ensure that the needs and requirements of the students are heard and fulfilled.*



Mr. Praveen Kumar P  
Staff Advisor



Aswin RK  
Chairperson



Poornima M P  
Vice Chairperson



Kasinathan A  
General Secretary /  
Representative UG (CE)



Alaap S Nair  
Magazine Editor



Sreepriya S  
Arts Club Seceretary



Vaishnav R  
University Union Councilor  
/ Sports Club Seceretary



Harinath  
Representative UG (ME)



Ardra L  
Representative UG (ECE)



Vinayak T Nair  
Representative UG (AI & ML)



M. K Amalu  
Representative UG (EEE)



Anantha Krishnan  
Representative UG (CSE)



Akhila L  
Representative PG (CE)



Uma Parvathy  
Representative PG (ECE)



Mangima V.S  
Lady Executive - 1



Meenakshi Suresh  
Lady Executive - 2

# GRADUATION DAY

*“Your life is your  
adventure. And the  
adventure ahead of you  
is a journey to fulfill  
your own purpose and  
potential.”*

*– Kerry Washington*



CE



CE



CE



**CE**



**CE**



**ME**



**ECE & EEE**



**CSE**



**EEE**

# DEPARTMENT OF CIVIL ENGINEERING

## DEPARTMENT ASSOCIATION INAUGURATION: CIVERA 2K23

The Department of Civil Engineering at MIT organised the much-awaited annual event, CIVERA 2K23, on November 10, 2023. The ceremony commenced with great enthusiasm and anticipation, graced by the esteemed presence of Principal Suresh Kumar, HOD of Civil Department Priya Grace Itti Eipe, and other distinguished dignitaries. The event was graced by the esteemed presence of Prof. Dr. B. Sunil Kumar, the Director of IIC Kollam.

Er. Priya Grace Itti Eipe, HOD, of the Civil Engineering Department, welcomed the gathering and expressed her gratitude to all participants and stakeholders for their contributions to making Association CIVERA 2K23 a reality. She emphasised the department's commitment to providing a platform for students to showcase their talents and exchange ideas. Dr. V Suresh Kumar, the Principal of MIT delivered an inspiring inaugural address, highlighting the importance of interdisciplinary collaboration, research, and innovation in addressing the challenges facing the civil engineering industry. Then, Dr. Balagopal, Associate Professor, Department of Civil Engineering, took the stage to introduce the distinguished chief guest, Prof. Dr. B. Sunil Kumar, Director of IIC Kollam. Dr. Balagopal highlighted Prof. Dr. B. Sunil Kumar's illustrious career, significant contributions to the field of civil engineering, and his esteemed position as the Director of IIC Kollam. Following Dr. Balagopal's introduction of the chief guest, Dr. B. Sunil Kumar, the ceremony proceeded with the presidential address delivered by Dr. B. Sunil Kumar himself. In his address, Dr. B. Sunil Kumar elaborated on several key points, emphasizing the significance of skilling the youth, promoting sustainability practices, and exploring employability opportunities for civil engineers.

The inaugural session was followed by a technical expo that showcased innovative projects, research findings, and advancements in civil engineering. Participants had the opportunity to explore cutting-edge technologies, sustainable practices, and futuristic solutions. An engaging session of technical games and quiz competitions added an element of fun and excitement to the event.

Association CIVERA 2K23 was a resounding success, thanks to the collective efforts of the organising committee, participants, and supporters. The event not only provided a platform for academic enrichment but also promoted innovation, creativity, and collaboration in the field of civil engineering. It served as a testament to MIT's commitment to nurturing talent and driving excellence in engineering education.

## NEWSLETTER FEBRUARY 2024

### MEMORANDUM OF UNDERSTANDING WITH HABILETE LEARNING SOLUTIONS PVT. LTD.

On February 5, 2024, the Department of Civil Engineering at the Mahaguru Institute of Technology (MIT) entered into a Memorandum of Understanding (MOU) with Habilete Learning Solutions Pvt. Ltd. This MOU marks the beginning of a collaborative effort between the two entities aimed at fostering innovation, knowledge exchange, and educational enhancement in the field of civil engineering. The MOU outlines a framework for collaborative research endeavours between MIT's Department of Civil Engineering and Habilete Learning Solutions Pvt. Ltd. This collaboration will facilitate the exploration of new technologies, methodologies, and solutions to address contemporary challenges in the civil engineering domain.

The MOU provides a framework for the transfer of technology and intellectual property between the two parties. This will enable the commercialization of innovative solutions and research outcomes, driving economic growth and societal impact. Overall, the signing of this MOU signifies a significant milestone in the journey towards advancing education, research, and innovation in the field of civil engineering. By leveraging each other's strengths and resources, MIT and Habilete Learning Solutions Pvt. Ltd. aim to make meaningful contributions to the advancement of the civil engineering profession and address the evolving needs of society.

## SEMINAR ON NAVIGATING EXCELLENCE -EMPOWERING FUTURE CIVIL ENGINEERS WITH CAREER INSIGHTS AND ESSENTIAL SKILLS

On February 7 2024 department of Civil Engineering, MIT hosted a seminar on Navigating Excellence -Empowering Future Civil Engineers with Career Insights and Essential Skills. The seminar aimed to provide aspiring civil engineers with valuable career insights and essential skills necessary for success in the field. Organized by the American Society of Civil Engineers (ASCE) Student Chapter at MIT, the event was facilitated by Dr. Kishor P, Treasurer of ASCE IS SR, with support from Dr. Simi MR and student coordinator Kasinadhan.A. The seminar commenced with an opening address by Dr. Simi MR, emphasizing the importance of continuous learning and professional development in the rapidly evolving field of civil engineering.

Dr. Kishor P, with his extensive experience in the industry, delivered a keynote speech focusing on emerging trends, challenges, and opportunities in civil engineering careers. He highlighted the significance of adaptability, innovation, and leadership in navigating a successful career path. The seminar included interactive sessions where participants had the opportunity to engage with the speaker, ask questions, and share their own experiences and concerns. This facilitated a dynamic exchange of ideas and insights among attendees.

The seminar concluded with closing remarks from student coordinator Kasinadhan.A, thanking the speaker, organizers, and participants for their contributions to making the event a success. She encouraged attendees to apply the knowledge gained to their academic and professional pursuits. The seminar provides a platform for aspiring civil engineers to gain valuable insights, guidance, and networking opportunities essential for their career advancement. With the support of industry experts like Dr. Kishor P and dedicated organizers like Dr. Simi MR and Kasinadhan.A, the event successfully empowered participants to embark on their journey towards excellence in the field of civil engineering.

## STUDENTS ACHIEVEMENTS

The Chief Minister's Student Excellence Award Ceremony for the year 2023 was held on January 25, 2024, at Thiruvananthapuram. This prestigious event aimed to recognize and honour outstanding students who have demonstrated exceptional academic achievements and contributions to their respective fields. Akhila L, an M Tech student in the Department of Civil Engineering MIT, was the distinguished recipient of the Chief Minister's Student Excellence Award for the year 2023. Akhila's dedication, intellect, and commitment to academic excellence have set her apart as a deserving candidate for this esteemed accolade.

## NEWSLETTER MARCH 2023

### ENGINEER'S DAY CELEBRATION

The Engineering Day Celebration at Mahaguru Institute of Technology on March 4, 2024, coordinated by Dr. Simi MR, marked a significant event in our institution's calendar. It brought together faculty members and students to honour the achievements and innovations in the field of engineering. The celebration commenced with an inspiring opening ceremony, setting the tone for the day's activities. Attendees were welcomed warmly, and the significance of the event was emphasised. The panel discussion that ensued provided a platform for engaging in conversations on the latest trends and challenges in engineering. The faculty members and students shared their perspectives on the field of civil engineering.

## **INDUSTRIAL VISIT: SASTHAMKOTTA WATER TREATMENT PLANT**

The Department of Civil Engineering organized an industrial visit at the Sasthamkotta water treatment plant on 15th March 2024 to provide students with practical insights into the processes involved in water treatment and management. The visit commenced at 11 pm, with 47 students from the Department of Civil Engineering eagerly participating in the educational excursion. The plant staff warmly welcomed the students and faculty members, providing an overview of the facility's operations and its significance in supplying clean and potable water to the surrounding areas.

The industrial visit to the Sasthamkotta Water Treatment Plant proved to be an enriching and educational experience for the students, offering them a first hand glimpse into the practical aspects of their academic studies. The insights gained during the visit are expected to enhance their understanding of water treatment processes and inspire them to contribute positively to the field of civil engineering and environmental management in the future.

### **WEBINAR ON UNVEILING QUANTITY SURVEYING: STRATEGIES AND OPPORTUNITIES**

The webinar on "Unveiling Quantity Surveying Strategies and Opportunities" was held on March 19, 2024, via Google Meet. The event was organised by Dr. Balagopal V, an Associate Professor in the Department of Civil Engineering at MIT. The webinar aimed to shed light on various strategies and opportunities in the field of quantity surveying, presented by Er. Linju Oommen Jacob, an esteemed speaker with expertise in the subject matter. Er. Linju commenced the webinar by elucidating the fundamental principles of quantity surveying, emphasizing its significance in construction projects. He elaborated on the role of quantity surveyors in cost estimation, material procurement, and project management.

### **WORKSHOP ON REVIT SOFTWARE**

Department of Civil Engineering, Mahaguru Institute of Technology, in collaboration with CADD Centre Mavelikara, organized a 5-day workshop on Revit at the CAD lab. The workshop aimed to equip students with practical skills in Revit software. Mr. Ajay V, Assistant Professor of the Department of Civil Engineering at MIT, coordinated the event, ensuring its smooth execution.

The aim was to provide students with practical skills and knowledge in Revit software. The workshop aimed to equip participants with the necessary tools and techniques to create comprehensive BIM models, enhancing their proficiency and readiness for future endeavours in the field of civil engineering and architecture. The objective is to provide participants with practical, hands-on experience in using Revit software for Building Information Modelling (BIM) and to introduce participants to advanced modelling techniques, custom family creation, collaboration tools, and project documentation within the Revit environment.

# Department of Electronics and Communication Engineering

NEWSLETTER SEPTEMBER 2023

## MINI PROJECT

### THE SMART DUSTBIN

By Divya Das, Animisha K Sadanandan, Midhun M.

The Swatch Bharat mission inspires us. In this proposed technology we have designed a smart dustbin using Arduino NANO, along with an ultrasonic sensor, servo motor, and battery jumper wire. The dustbin lid will open when someone comes near at some range and then wait for a user to put the garbage and get closed automatically. In a societal setting, it will help toward health and hygiene.

### AUDIO GUIDANCE SYSTEM FOR BLIND

By, Nimisha S, Praisya B Prakash, Megha J.

The visually impaired community believes that they are a burden to society and they do not participate in normal activities. This separates blind people from society and they do not participate in the normal tasks of society. The visually impaired people mainly face most of the problems in real time. This work aims to turn the real-time world into an audio world by telling the blind person about the objects in their way. This will enable blind persons to identify the things, without any external help. We accomplished this goal by adding ultrasonic sensors at specific positions that provided information about the environment.

### VEHICLE TAIL AND BUMPER CRASH ALERT SYSTEM

By Pavithraganga Padmanabhan Potty, Sethulekshmi J Pillai, Minhaj A.

An estimated 3,000 car accidents happen every day across the world, additionally, deaths related to car accidents rank eleventh among the most common causes of death. Many of these accidents occur due to a millisecond of carelessness on the driver's part which can cause a fatal incident. This project was inspired by one such incident that occurred to one of the students that caused them moderate injuries. With the use of an IR crash sensor, accident rates can be reduced considerably. This sensor can detect when another vehicle approaches at a dangerously close distance from the tail or bumper of the vehicle and alerts the driver of the danger. With the warning given at the right time many numbers of vehicle crashes can be avoided.

### AUTOMATIC RAILWAY GATE CONTROL SYSTEM

By Alan Zachariah, Rahna M., Devika S Nair.

Accidents happen at railway crossings due to the unmanned level crossings and the carelessness of road users. This is a simple system, which automatically closes the level crossing gates during the train's arrival and then the gates are opened automatically when the train passes by. In this system, they have used IR sensors for detecting the departure and arrival of the trains. As soon as the sensor senses the train's arrival it sends a message to the Arduino. After that, the servo motor which is attached to the gates will close them and it will be opened after the train passes by. Here, the hardware is supported by an Arduino UNO. This system is automated, highly effective, and cheap. And this system will eliminate the manpower used at the railway level crossings.

## ACHIEVEMENTS

- Best Nss Volunteer Award 2022-2023- Ms. Pavithraganga Padmanabhan Potty (2020-2024 Batch)
- Award Of Appreciation Key Performer Of IEDC- Ms. Pavithraganga Padmanabhan Potty (2020-2024 Batch), Ms. Nimisha S (2020-2024 Batch)
- Mr. Midhun M scored an SGPA of 7.54 in S5 University results. (2020-2024 Batch)
- Ms. Abhinaya A scored an SGPA of 9.27 in S3 University results. (2021-2025 Batch)

NEWSLETTER OCTOBER 2023

## ACHIEVEMENTS

- Mr.Ratheesh Kumar completed the Web Of Science Academy Course on "An Introduction to Ethical Publishing Behaviour". Mr.Ratheesh Kumar completed an online course on "Machine Learning: A Beginners Basic Introduction" in Udemy.
- Mr.Anup Vasavan successfully completed NPTEL-AICTE FDP on "Hardware Modelling Using Verilog". Mr.Anup Vasavan participated in the IEDC Summit 2023 by Kerala Startup Mission on 12-10-23 at CET, Trivandrum.

- Mr.Prajeesh R completed the AICTE Recognized FDP on "Machine Learning using Python" conducted by NITTR, Chandigarh.
- Ms.Ponnambili coordinated the department association inauguration program conducted on 6-10-23.
- Ms. Ponnambili participated in the 7-day National Level online FDP on "NEP 2020, OBE, and AI Advancements conducted by Mar Thoma College for Women, Perumbavoor from 12th Oct to 19th Oct.
- Ms.Malu communicated a journal paper titled "Review on Vertical Transition Metal Dichalcogenides heterostructure MOSFET" to Wiley Scrivener Publishing.
- Ms.Sony Sethukumar completed the AICTE Recognized FDP on "Machine Learning using Python" conducted by NITTR, Chandigarh.
- Ms. Abhinaya, Ms. Ardra, and Ms. Arya students of the S5 ECE 2021-2025 batch participated in the international conclave on Skills, Engineering, and Technology conducted by the ICT Academy of Kerala
- Ms. Abhinaya, Mr. Ayyappan of S5 ECE 2021-2025 batch, Ms. Pavithraganga S7 ECE 2020-2024 batch, and Ms. Nandana. Mr. Giri S3 ECE 2021-2025 batch participated in the IEDC Summit, Trivandrum on 12-10-23.
- Ms Arya, Ms. Ardra and Ms. Abhinaya designed and executed a technical game titled "Remembrain" The game attracted students from various departments, with the winners receiving prizes for their outstanding performance.
- BUZZ WIRE Game Conducted by Ms. Nimisha and Ms. Rahna S7 ECE Batch of 2020-2024.
- Debate Competition Hosted by Ms. Pavithraganga from S7 ECE 2020-2024 Batch. In an exciting event open to all departments, Ms. Pavithraganga led a debate competition that saw several enthusiastic participants. Congratulations to the winners who received well-deserved prizes.

## ASSOCIATION (NEONZ) ACTIVITIES

- Neonz, the association of Electronics and Communication Engineering was inaugurated on 6-10-2023 by Dr. Anish Gopinath, Scientist/Engineer, VSSC, ISRO. Seminars, workshops, and technical competitions were conducted.
- Seminar on "A journey through the past, present and future with an emphasis on avionics system by Dr. Anish Gopinath, scientist VSSC, ISRO, was conducted as part of the association Inauguration.
- Conducted "Debate" as part of the association's inauguration. The student batch from S7 EEE 2020-2024 batch was the winner.
- Ms. Nimisha and Ms. Rahana of S7 ECE 2020-2024 batch conducted a game "BUZZ WIRE". Students from all departments participated and winners were awarded with prizes.
- Ms.Arya, Ms.Ardra, Ms.Abhinaya developed and conducted the technical game called "Remembrain", Students from all departments participated and winners were awarded with prizes.
- Conducted workshop on "PCB Design and fabrication for the students of (2023-2027) batch from all branches.

## PLACEMENT AND TRAINING PROGRAMS

- LinkedIn Career Kick Start Workshop: One-Day Event on 20-09-23
- Camerinfools Hosted a One-Day Seminar on "Job Opportunities" on 11-10-23.
- Geebee Education conducted a One-Day Seminar on "Higher Studies Abroad" on 16-10-23.
- KKEM conducted One-Day Workshop on "DWMS Registration" on 17-10-23.

# Department of Mechanical Engineering

## NEWSLETTER AUGUST 2023

- Dr Manikanda Prabu N published a research article on "Investigations and Optimization of process parameters for Improving surface quality in the Internal Grinding of EN31 Steel" in European chemical bulletin, 10/12/2023.
- Dr Manikanda Prabu N attended a five-day faculty development program on "Effective Documentation on NAAC", held at Arjun college of Technology, Coimbatore.
- Mr Praveen Kumar P attended a five-day Online faculty development program on "Recent Trends in Mechanical and Automobile", held at Sree Narayana institute of technology, Adoor.
- Mr Yadhu Krishnan attended a five-day Online faculty development program on "Recent Trends in Mechanical and Automobile", held at Sree Narayana institute of technology, Adoor.
- Mr Midhun M attended a five-day Online faculty development program on "Recent Trends in Mechanical and Automobile", held at Sree Narayana institute of technology, Adoor.
- Ms Nithya Krishnan submitted proposal for MSME IDEA HACKATHON 3.0, a national level contest and shortlisted for next level.

## CAMPUS VIBES

- Celebrated 77th Independence Day and conducted quiz program.
- Celebrated traditional Onam fest on 26/08/2023 and various events were conducted.

## STUDENTS PARTICIPATION

- S7 students attended one day seminar on "Unleashing the potential of nanomaterials in electronics marvel", conducted by department of Electronics and Communication Engineering
- Students attended "Quiz program" conducted by NSS Unit

## NEWSLETTER AUGUST 2023

- Dr Manikanda Prabu N submitted a manuscript on "Performance and emission characterization of Diesel Engine fuelled by biodiesel- Gasoline blends at a distinguished injection pressure" in South African Journal of Chemical Engineering Elsevier.
- Mr. Praveen Kumar P submitted a book chapter on "Additive Stir Deposition" in Solid State Additive Manufacturing. (DOI: 10.1201/9781032616025-3)

## STUDENTS PARTICIPATION

- Aakash P V, S7 Mechanical Student was selected for State Wrestling Championship
- Saleesh S, S5 Mechanical Student was selected for State Wrestling Championship
- Kiran Thampi, Richu P and Sakheer Khan H, students of mechanical Engineering teamed up and participated in the Flameless Cooking competition conducted by IEDC MAHAGURU TECH at Mahaguru

## DEPARTMENT ASSOCIATION

- Sayooj Krishna, S7 mechanical student was chosen as the President of the Department association
- Anurag A, S5 mechanical student was chosen as the secretary of the Department association.

## NEWSLETTER NOVEMBER 2023

- S3 & S5 ME NSS students participated in the children's day special program "KALLIKUDUKA" with Kattachira LP School children.
- Mechanical students participated in a workshop on "Problem Solving and Ideation", conducted by IEDC AND IIC, Mahagurutech. this workshop was handled by Jikku James, Nodal Officer IEDC & ide agora start-up centre, St. Thomas College, Ranni, Kerala
- Mechanical department conducted an association programme "N -Torc" on 20/11/2023, inaugurated by Chandra boss, managing director KMML. IPR Expert Mr. Krishnamurthy gives a special talk about IPR.

- As a part of "N-TORC", we brought a unique showcase featuring bus parts from KSRTC Bus Depot, Mavelikkara.
- Students created working models of different machines and exhibited them in "N-TORC"
- Spider web was the highlight of the "NTORC" created by the students
- Mr. Arun Kumar G, Assistant Professor, Department

- of Mechanical Engineering, has participated as judge in the DEKATHON 2.0 (An Indo - Malaysian International Hackathon) at St. Thomas College of Engineering and Technology, Chenganoor

## NEWSLETTER DECEMBER 2023

- Dr Manikanda Prabu submitted a paper on "Compatibility study on calophyllum Inopyllum methyl ester bio diesel as alternative fuel for IC Engine in environment engineering and management journal
- Mr Praveen Kumar P published a book chapter "Additive Friction Stir Deposition" in Solid State Additive manufacturing. (DOI:10.1201/978103261605-3)

## ACADEMIC INIATIVITIES

- Mechanical department conducted a depart meeting on 05/12/2023
- Internal marks and Attendance of S7 & S5 Mechanical Students published on 07/12/2023
- Internal marks and attendance of S3 Mechanical students published on 21/12/2023

## CAMPUS VIBES

- Celebrated Christmas fest on 23/12/2023 all the faculties of mechanical are participated on the fest

## NEWSLETTER JANUARY 2024

### ACADEMICS

- Semester exams for S3, S5 & S7 mechanical students starts from 03/01/2024.
- Commencement of S4, S6 classes from 29/01/2024
- Department meeting is conducted on 22/01/2024

### FACULTY PARTICIPATION

- All the mechanical faculties visited KMML (Kerala Mineral and Materials Ltd. Chavara, Kollam) as a part of MOU on 20/01/2024.
- All mechanical Faculties participated a workshop on Quality Indicators & Metrics, held at Mahaguru Institute of Technology on 23/01/2024
- Dr Manikanda Prabu N presented a paper titled "Light Spectrum Optimization ADABOOST SVM for the Secured Communication in Vehicular AD HOC Network" at the Second International Conference on Innovations in Robotics, Intelligent Automation and Control (ICIRIAC) organized by the de
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#### **DEPARTMENT ACTIVITIES**

- Mechanical Department signed a MOU with KMML on 23/01/2024. MOU is handover between Dr Suresh Kumar V (principal MIT) and Dr Chandrabose (MD, KMML)

#### **CAMPUS VIBES**

- All the mechanical faculties participated in MITWA's (MIT Staff Welfare Committee) inauguration program on 25/01/2024 and various events are conducted.
- Celebrated 75th republic Day on 26/01/2024 at MIT campus and various events are conducted

#### **NEWSLETTER FEBRUARY 2024**

##### **FISAT CUP 2024**

- Our college faculty team recently participated 3-day FISAT Cup Cricket 2024, held at FISAT College, Ernakulam, and emerged as the runner-up in this exhilarating competition

#### **STUDENTS PARTICIPATION**

- Mechanical students participated on special C programming classes conducted by computer science department.
- Mechanical students are engaged in their final year project, focusing on conducting experiments and research involving lathe machinery.
- Mechanical final students participated many seminar programs conducted by the MIT placement cell.
- As a part of placement training, mechanical students attended the mock interview conducted by department placement team.

# Department of Electrical and Electronics Engineering

## NEWSLETTER APRIL 2023

Electrical and electronics department of Mahaguru Institute of Technology organised an association event on 11 th of april 2023. The mark of the main events of the inauguration program began with the entry of the chief guest Mr. Anand Maruti Malak, Additional general manager (OM & RESOLAR) at NTPC kayamkulam. In addition to this, principal, Dr. Manju J, Dean Academics, Mr. Arun Elias, HOD EEE dept., Prof. Sarath S, all other head of the departments, teaching and non-teaching staffs were present at this auspicious occasion.

The welcome speech was delivered by Mr. Sanju M Sathyan, followed by presidential address by Mr. Sarath S. Lamp lighting event of the day was performed together by all the significant personalities on the stage. It simulated a belief in all of us that all the paths that we may go through in the future will be illuminated to lead us to choose the right way.

Mr. Anand Maruti Malak then delivered an inspirational inaugural speech and also shared some incredible and rare life experiences that made us ponder on how fast the technologies in the field of power transmission are developing and it motivated everyone to dream and achieve higher heights. Introduction to Mr. Mohammed Sajin Et. al. The team gave a brief introduction to Dialex software and also demonstrated how a simple 3D design of a building can be created from an existing 2D plan.

## FACULTY ACHIEVEMENTS

In 2023, Mr. Amjith S was honored with the prestigious Best Faculty Award. His remarkable dedication to teaching and mentoring has left an indelible mark on our institution, with innovative teaching methods and a deep understanding of his subject, Mr. Amjith has been a beacon of inspiration for students. This award recognizes his invaluable contributions to our academic community, celebrating his unwavering commitment to education.

## STUDENTS ACHIEVEMENTS

- University topper award in ohara mini tech 2022
- Alaap. S. Nair, one of our outstanding student, has received the coveted 'university topper award' in Ohara mini tech for 2022. This remarkable accomplishment reflects our commitment to academic excellence and serves as an inspiration to all aspiring students
- Best project (detachable solar powered electric wheel chair) - 2023
- In 2023, our students have earned the title of 'best project for their innovative creation, the 'detachable solar-powered electric wheelchair. This remarkable achievement reflects their dedication to improving accessibility and sustainability, setting a high standard for innovation at our institution."
- Best student award in ignite v3
- Sanju M Sathyan, AlaapS Nair, and M K Amalu have won the 'best student award' in ignite v3. They were chosen because they're excellent students who work really hard and come up with great ideas.
- IEDC Womens competition 2023
- Lekshmi Krishna was the winner of the IEDC Women's Competition in 2023. Her creativity and entrepreneurial spirit have shone brightly, making our institution proud.
- IEDC Overall Championship (EEE Department)-2023
- The EEE department at our college is celebrating a remarkable achievement in 2023 as they clinched the Overall Championship at the IEDC (Innovation and Entrepreneurship Development Cell) competition. This prestigious victory is a testament to the department's dedication, innovation, and collaborative spirit. Throughout the competition, our EEE students showcased.
- IEDC Cash award for debate 2023
- Syam Hari, Aswin Ramesh, Kiran Dev, Jishnu, and Akshay have been honored with the IEDC cash award for their remarkable debating abilities, highlighting their commitment to innovation and entrepreneurship. Their eloquence and persuasive arguments have distinguished them, underlining the significance of debate in cultivating critical thinking and communication skills among students. This recognition is a testament to their dedication and intellectual prowess.
- EEE Dept Quiz competition winner 2023
- University topper award in ohara mini tech 2022

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- EEE Dept Quiz competition winner 2023
- Navya secured the coveted first prize in the 2023 EEE Department quiz competition, reflecting her outstanding grasp of Electrical and Electronic Engineering. Her achievement is a testament to her dedication and expertise in the field.
- EEE Dept Association day poster design competition 2023
- Kiran Dev has earned the coveted 1st prize in the 2023 EEE Department Association Day poster design competition, showcasing remarkable creativity and design prowess. Alaap S Nair has won the 2nd prize.
- Management appreciation for the class topper (S5 EEE) 2023
- Management extends its heartfelt appreciation to Alaap S Nair, the class topper of 55 EEE in 2023. Alaap's dedication and academic excellence have earned this well-deserved recognition from the management.
- Management appreciation for the class topper (S3 EEE) 2023
- Management extends its sincere appreciation to MK. Amalu, the class topper of 53 EEE in 2023. Amalu's hard work and academic achievements have earned her this well-deserved recognition from the management. Congratulations, M K Amalu

## NEWSLETTER OCTOBER 2023 ASSOCIATION INAUGURATION

The Association inauguration has conducted on October 11 our chief guest was Dr B Premlet . The welcome speech was done by Jishnu S. The presidential speech done by Mr. Sarath S, HOD of EEE department. The event is inaugurated by Dr Suresh Kumar (principal ), association name has revealed by Dr Manju S ( vice principal), felicitation has done by Amjith S (Asst. prof), vote of thanks by Akhil Vidyadharan of S7 EEE.

### TECHNICAL TALK

Technical talk was conducted by Dr B Premlet in the forenoon. The section was very informative and attentive.

### ITBP WEAPON EXPO

In the after noon ITBP weapon expo was conducted. Every department participated in it.

### STUDENT PROJECT EXPO

An exhibition was conducted with mini projects made by students of various departments.

### VALIDICTORY FUNCTION

Price has distributed for the various programs conducted in the association

inaugural day, the various programs were word puzzle, buss wire, cut post and mini project competitions. Celebrated 75th republic Day on 26/01/2024 at MIT campus and various events are conducted

#### **WEBINAR ON ALUMINI INTERACTION**

On October 15, 2023, the Department of EEE and Alumni Interaction hosted a webinar titled "Simplifying Testing with Automation - A Comprehensive Overview." Mr. Vishnu Karesh, a back-end software developer at Simpligics, served as the resource.

#### **INDUSTRIAL VISIT**

The IV has conducted from 21/10/2023 to 26/10/23. Visited the industries JRR Sinece solar pvt limited and Synro Robotics pvt limited

#### **IEEE MEMBERSHIPS**

18 students of S7 EEE has taken IEEE membership The students are, Abhilash, Alaap S Nair, Alen John, Anandhu P, Anandu V, Ananthu P, Aswin M, Lekshmi Krishna, Pranav Gokul, Vishnu S Nair, Akhil Vidhyadharan, Malavika s, Alwin C Ponnann, Aswin Ramesh, Akshay Das, Syam Hari, Jishnu S, Kiran Dev

#### **DEPARTMENT ACHIEVEMENTS**

MOU signed with Arcite School of Technical Education, Kollam on 30-10-2023

# Department of Computer Science and Engineering

## NEWSLETTER OCTOBER 2023

- On the 23rd of August 2023, the Google Developer Students Club (GDSC) at Mahaguru Institute of Technology organized an engaging information session that gave the students a brief introduction about the club and the future activities of the club.
- Department of Computer Science and Engineering renewed MOU with Camerinfools Pvt. Ltd Kochi.
- Ms. Preeti Mariam Mathews presented a research paper at the Fourth International Conference on “Advances in Physical Sciences and Materials”(I-CAPSM 2023) held at KPR Institute of Engineering and Technology in Coimbatore with the title “Role of Internet of Everything(IoE) in Higher Education: An Overview.”
- Anandhu Anil, Arjun Vijay, Arjun M J and Sidhardh S of S5 CSE got first prize in the quiz competition conducted in connection with the independence day.
- Yadhu Krishna M, Dayal Naron, Vinayak T Nair and Vaibhav Nair got second prize in the quiz competition conducted in connection with the independence day.
- Darsh S Kumar & Anantha Krishnan attended freedom fest from 12th January 2023 to 16th January 2023 at Tagore Theater Trivandrum.

## NEWSLETTER NOVEMBER 2023

- Our esteemed Chairman, Shri Gokulam Gopalan, along with all members of the management team, offered heartfelt congratulations and expressed gratitude for the achievement of accreditation by the National Board of Accreditation (NBA). In a moment of celebration, Principal Sir proudly presented the NBA certificate to our revered Chairman, Shri Gokulam Gopalan, marking a significant milestone for our institution. This recognition stands as a testament to our collective dedication to excellence in education and underscores our commitment to continual improvement and quality assurance.
- Principal Sir handed over the certificate of NBA to our beloved chairman Shri. Gokulam Gopalan Sir
- The Department of Computer Science and Engineering organized a comprehensive session titled “How to Initiate Academic Research and Navigate Publications,” featuring Dr. Arun Elias, our esteemed Dean of Academics, as the keynote speaker.
- Ms. Chithra S Ravi, our esteemed faculty member, took the initiative to coordinate a comprehensive seminar on Cyber Security and Ethical Hacking tailored specifically for the S7 and S5 students, providing them with invaluable insights and knowledge in these critical domains.
- Ms. Preeti Mariam Mathews, in collaboration with TechByHeart and the Coding Club, orchestrated a dynamic workshop focused on Cyber Security and Ethical Hacking, catered specifically to final-year students.
- On November 15, 2023, the Department of Computer Science and Engineering formalized a MOU with Expert Enxcl, solidifying a partnership aimed at fostering collaboration and advancement in the field.
- The Management and Principal of our college extended their heartfelt congratulations to the top performers among the S2 and S4 students, acknowledging their outstanding academic achievements and presenting them with tokens of appreciation as a testament to their hard work and dedication.
- On November 20, 2023, the Red Hat Academy Training program facilitated an additional 40-hour course on AD141: Introduction to Python Programming exclusively tailored for students enrolled in the Computer Department, further enriching their skill set and enhancing their proficiency in Python programming language.
- Ms. Vivitha Vijay and Ms. Hema H recently published a paper titled “IoT-based Smart Greenhouse System for Controlled Environment Agriculture” in the International Journal of Internet of Things and Smart Technology (IJIOS), shedding light on innovative approaches to enhancing agricultural practices through IoT technology.
- In the Keraleeyam 2023 Seminar session held at the Mascot Hotel in Trivandrum, Aswin V and Mrinal M Prasad, both from the S7 Computer Science and Engineering (CSE) batch, actively participated, contributing their insights and expertise to the enriching discourse.

## NEWSLETTER FEBRUARY 2024

- The Department of Computer Science and Engineering, in association with the Coding Club and Enxel Business Solutions Pvt Ltd, orchestrated an online Faculty Development Programme focusing on “Recent Advances in Computing,” spanning from the 29th of January to the 2nd of February in the year 2024.
- 5 days Faculty Development Programme on Natural Language Processing (NLP) was organized by Department of Computer Science and Engineering in association with CSI from January 22-24, January 27-February 3, 2024.
- The Department of Computer Science and Engineering hosted an “Add-on Course on Flutter App Development” tailored for third-year students. This comprehensive course took place from the 19th to the 23rd of February 2024, aimed at equipping students with practical skills and knowledge in developing applications using Flutter technology.
- Ms. Preethi Mariam Mathews, Ms. Mathu Uthaman, and Ms. Sreelekshmi. B have received a notification of acceptance for their book chapter submission on February 3rd, 2024. This notification acknowledges their valuable contribution and signifies the approval of their work for inclusion in the book.
- Students of S8 engaged in an Awareness Seminar focused on Higher Studies and Competitive Exams, organized by the MIT Career Guidance and Placement Unit. This seminar provided valuable insights and guidance to the students regarding their options for further education and preparation for various competitive examinations.
- Students of the S8 participated in a comprehensive three-day Career Development Programme titled “Moulding the Future” held from February 19th to February 21st, 2024. This program aimed to equip students with essential skills, knowledge, and insights necessary to shape their career paths effectively in today’s competitive landscape.

# NAVIGATING THROUGH ENGINEERING A JOURNEY OF PASSION, CHALLENGES AND INNOVATION



Dr. P.K. Suresh is an expert academician and consultant. He has worked as a consultant and faculty with a great wealth of experience on his hands. He won the award for best paper from the Indian Geotechnical Conference in 1988, for his MS Thesis on Analyses of Piles subjected to lateral loads. He also guides students of IIT Madras on their projects. He also has field experience that has greatly helped in his faculty work.

## **H**ow was your engineering journey?

In those times there were only 7 engineering Colleges, SSLC and pre-degree were something that people will look at, society would judge you based on your performance in Pre-degree, and if you were not admitted in an engineering or medical stream you would be looked at something like second rated. In our family all my cousins were engineers, during that time I completed my pre-degree in 1980 with around 90% of marks. Trivandrum Engineering College was the only available option, I was planning to take mechanical, civil, or electrical engineering. Finally, everybody suggested that I should choose civil engineering, because that would boom in society. So I took civil engineering, earning an engineering degree in that era brought a deep sense of personal achievement and validation. I was just an average student, who passed out within the prescribed academic period without any backlogs, back then getting passed was very difficult, especially in practicals. I passed out in 1985 with around 67-68% of marks. To get a job you have to be competent, just a degree is not sufficient, I came to know this only after attending 2 or 3 interviews. In those days if you wanted to get selected through a campus interview you should join either NIT or IIT. So I just decided unless I entered into some good IITs or NITs my future would be bleak, so I prepared for GATE. Usually, I studied 15 hours a day, then finally 18 to 19 hours for the last four months. It was a very herculean preparation, even though I was working in an office I always carried a diary. On the day of the GATE result publication, I went to IIT for an interview, and there they asked so many questions, I couldn't answer even a single one, in the evening when I was waiting for the Cochin Express, my friend came running and told that I have scored 90% in GATE. That gave me confidence and I started applying for MS and MTech. I was not eligible for MTech because you should get between 96-99% for that. In MS there were 2 vacancies and they conducted an interview, so the interview was over and I got admitted for MS in ocean engineering at IIT Madras.

### **What made you passionate about ocean engineering?**

At that time I got bored of concrete and all, then my thought was you can build a house with only a mason you don't need a civil engineer. So I decided to make a slight shift from civil engineering. Ocean engineering is a multi-disciplinary branch if you see it has computer applications, and I joined with a professor Mr. Gandhi who later became the director of NIT Surat one of the leading persons in foundation engineering, another guide was Dr. Raju who became the director of IIT Delhi and they were doing a project on wave energy at Vizhinjam in 1986-90 about generating electricity from wave and I was inspired by that to join ocean engineering.

### **So you mentioned preparing for GATE, I would like to ask, whether preparing while working in the core field increases the chances of cracking GATE?**

If you are in a private firm, you won't get enough time and there would be a lot of work pressure, but if you join as an apprentice, you will have lots of time. The field experience would help you in faculty interviews because if you can co-relate the theoretical knowledge with field experience it will be helpful when you work as faculty. But for GATE it would not be of much help.

### **What was the most challenging situation you faced?**

When I joined for MS the problem was, that my language proficiency was not good, also the engineering colleges in Kerala they would not give importance to mathematics, if you wanted to be a good engineer you should plunge into mathematics. What happened was, that my professor gave me the research topic and asked me to go to the library and do a literature survey on it, then, I did not know what a literature survey was, I asked him how could I make a literature survey, and I am not a literature graduate! then he explained what a literature survey is. After spending much time in the library reading journals, I completed it and showed him, he told me, that I should understand the equation, apply boundary conditions, and all, we used to study all the equations from an exam point of view, so it was very difficult to use in application, but I gradually overcame it.

### **What was your most memorable moment as a student?**

We had a 27-day tour during my time at IIT, where we traveled all over India. At the time the only places I went were Trivandrum and at most Madras, nowhere else, so it was a very great experience and a memorable one.

### **What was your feeling when you received the award for the best paper from the Indian Geotechnical Conference?**

A student coming with 68% getting an award for his MS paper! That was the greatest achievement of my life. I never expected it, it was the first ever paper I did. We integrated electronics into civil engineering. We hooked some electronic sensors inside the piles while casting and the sensors were taken out using a cable. What we did was we did a load test and measured the actual load using an oscilloscope, which was an amazing experience, the integration of electronics was truly amazing, in those days such papers were rare, and that was why we got the best paper award.

### **What is your opinion about integrating multiple disciplines of engineering in doing a project?**

When I was working as the principal of Meenakshi College of Chennai, I picked some of my artificial intelligence students to present a paper at an international conference held at Kasargod. For that paper, they took the rainfall pattern of Ernakulam for about 40 years and then they predicted the future rainfall pattern. So, you should work in a multi-layer not focus on a single field.

### **One of the projects you guided was the design of a gravity dam, could you give us an idea of what a gravity dam is?**

So in a gravity dam the stability of the structure comes from the weight it is holding. Imagine an empty chair, if you kick it, it would fall, now suppose a heavy person is sitting on it, now it would not budge when you kick, this is how a gravity dam works. Usually, when weight is applied to a structure, like a bridge, it bends to maintain the stability of the structure, but in a gravity dam, its stability increases with the weight it is holding, it does not require any reinforcements.

### **How is the ecosystems protected when construction in the ocean is carried out?**

For delicate and endangered ecosystems, like the mangrove forests the project would not be approved, for other projects they should obtain an MoU of clearance.

### **What is the process of obtaining an MoU?**

First of all you should mark the project area on a map of 1:15,000 scale, this should be done by some accredited agencies, Institute of Remote Sensing at Anna University is one of the accredited centers. Then you have to conduct an Environmental Impact Assessment and prepare an Environmental management plan through an accredited agency, they are a team of electronic, mechanical, environmental and civil engineers, who will observe the quality of water, the turbidity, the botanical growth, the marine organisms there and they give a report. If the report is convincing the ministry will approve. Finally, all these proposals should be studied in one of the 7 notified institutions, some of them are IIT Madras Ocean Engineering, IIT Bombay Department of Coastal Engineering, etc. You should get a technical feasibility from the institutions. As IIT Madras is fast in doing these studies we are getting more of works.

### **Was there any project that has been rejected when you were doing consultancy?**

Generally most of the projects would get through if everything is right, but there was one project in Tirunelveli district, they constructed a check dam in the lower reach but it was in the CRZ, and they constructed without taking approval. Finally, the project was brought before the committee and they did not approve, but the check dam was already constructed.

### **Which was the most wonderful experience in your career?**

I joined Tamil Nadu PWD and took up a research position, there the advantage is that it is away from the influences of politics and the contractors, so there I contributed a lot. Usually, once in three years, we will be shifted, but as I was specifically placed there, I worked for 19 years in that position. One of the greatest moments I encountered was a one-week training at the Indian Institute of Science where Dr. A.P.J. Abdul Kalam took a class for us.

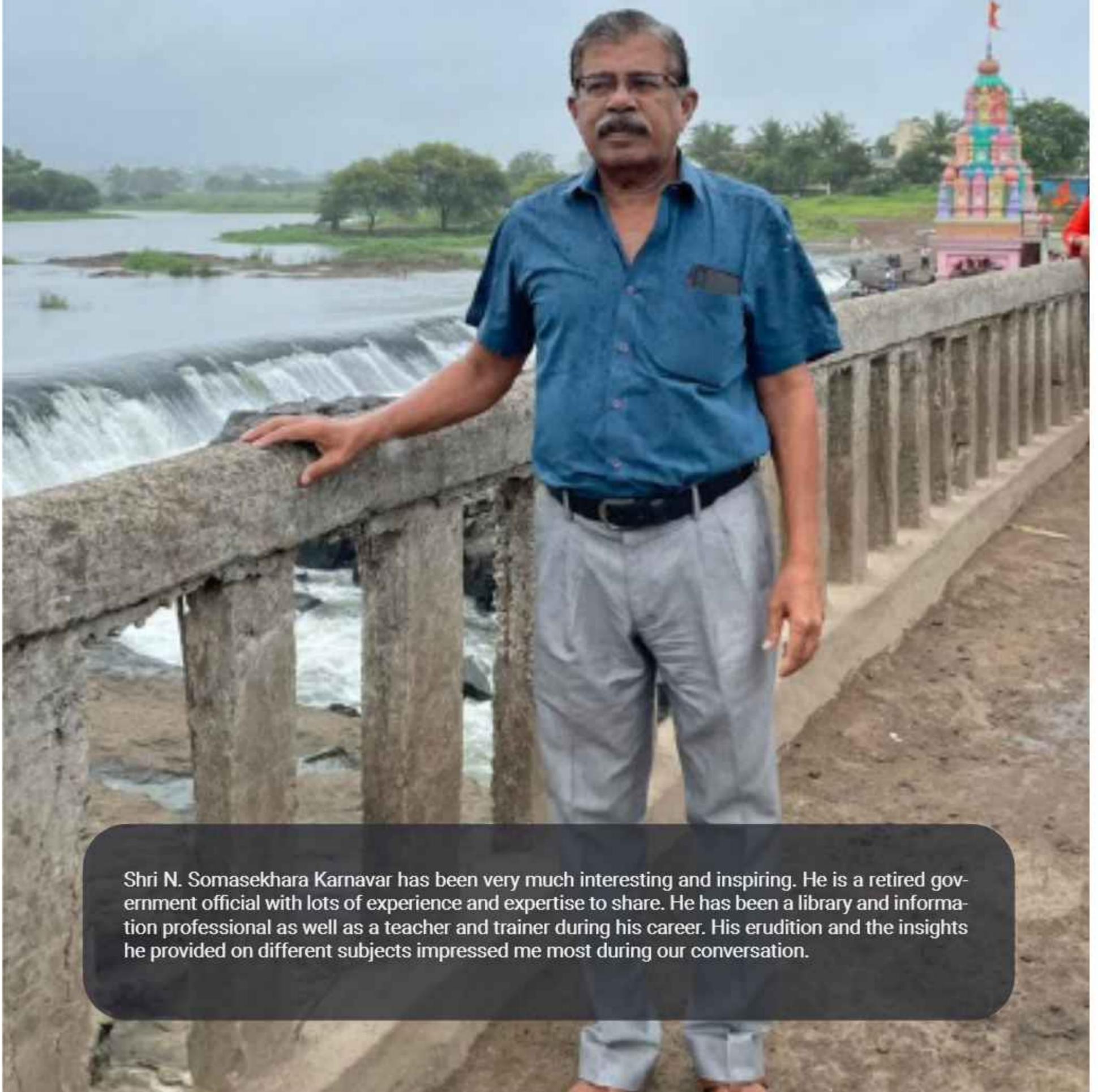
### **What are the avenues that civil engineering graduates can explore?**

First of all you should be ready to move out of Kerala. A civil engineer can also take up Information Technology, but you should also look for core jobs because they are evergreen.

### **What would be your greatest advice to budding engineers?**

You should study very well in these four years, focus deeply on mathematics, take up online courses through NPTEL, and stay away from movies, games, and all such entertainment.

# MANOEVURING KNOWLEDGE THROUGH THE YEARS



Shri N. Somasekhara Karnavar has been very much interesting and inspiring. He is a retired government official with lots of experience and expertise to share. He has been a library and information professional as well as a teacher and trainer during his career. His erudition and the insights he provided on different subjects impressed me most during our conversation.

**A** t the outset, please tell me about your educational and career achievements.

I was born into a family of teachers. My grandfather and father were teachers who were well-respected in the society. I was initiated into studies by the village Aashaan. Aashaan is the teacher at the native nursery school. I could read and write when I was four years old. Because of this over-enthusiasm shown by me in my studies, I was admitted to Class 2 in the local school at the age of five years. This early entry into education brought me accolades and also some disappointment. The disappointment was that I could not get admission to the engineering college as I was underage at the time when I passed my Pre-degree course. Eventually, I took a BSc degree from the Kerala University. Then I got MSc and BLibSc degrees from Saugor University in Madhya Pradesh. With the Library Science qualification, I got my first job at All India Radio as a Librarian. I enjoyed my stint at All India Radio as I liked the cultural ambiance there. There I worked with many renowned artists. I could meet many literary celebrities who frequented All India Radio. I still remember my meeting with OV Vijayan, the great Malayalam novelist and cartoonist when he visited All India Radio. In the 1970's, every youngster was dreaming of getting a four-figure salary, which was always tantalizing. Then I took study leave and went to Mysore University to pursue the MLibSc program. I passed the MLibSc examination with distinction. I started applying for better jobs. As a result, I got the position of Assistant Library and Information Officer in the Ministry of Culture in New Delhi in 1983. It was a great turn in my life and career. By this, I achieved my dream of getting a four-figure salary and a Gazetted Officer position.

**What were your roles and responsibilities as the Assistant Library and Information officer?**

We had to work with books, collecting, cataloging them and providing them to the officials. When the ministers or higher officials needed any information on any relevant matter, the required information is to be properly provided. Many a times, they need information for speeches. It was a challenging task to provide the right information. Those were the times when I got real job satisfaction.

**You got the opportunity to study in Britain during your tenure in the Ministry of Culture. How did you get that?**

That was the fulfillment of an aspiration that was cultivated right from my childhood. When I was young, I used to browse foreign magazines with glossy pages and colorful illustrations brought by my father. It had pictures of the majestic buildings of universities. Thus I developed a wish to go to foreign countries to study and know their culture. Luckily the Ministry had a scholarship programme sponsored by the British Council as part of the Colombo plan. Employees having good track records were given an opportunity to take an MA or M.Phil. in library studies at British Universities. The sincere work I had imparted in the Ministry was noticed by the concerned authorities and I was selected for the scholarship to join the MPhil course at Loughborough University in England. It was another dream come true.

**Can you tell me about your time at Loughborough University?**

We landed in England in January 1991. It was chilling and the grounds were filled with frost. The branches of the trees were bare. Birds were not visible. By February there were some changes. The daffodils started blooming. Flowers and leaves appeared on the trees and there were chirpings of birds. Thereafter it was spring-time. All the four seasons are distinctively discernible in Britain. It was a very fascinating experience. The MPhil research was on computerizing library management. It was the first time that I saw a desktop computer with a graphical user interface. It was a novelty those days. Those were the early days of computerization. I successfully completed my MPhil program in one year and returned to India with lots of computer experience.

**Tell me more about your life and experience in Loughborough..**

Loughborough is a small town in the East Midlands region of England. The people of Loughborough were very friendly. The custom of wishing even a stranger on the roads initially felt odd to me. Soon I also started wishing everybody coming across me on the roads. The hostel had a well-equipped kitchen. I along with an Indian friend from Uttarakhand collaborated for cooking. Chicken and mutton were abundantly available in the supermarkets and the prices were affordable. Fresh vegetables were available in the weekly markets. Indian grocery items were available in the corner stores run mostly

by Indians of Punjabi or Gujarati origin. But we were mostly confined to vegetarian food preparation. We took a lot of milk. We cooked curries with dal, fresh cheese and Brussels sprouts. Rice was our mainstay in food. By God's grace, despite the change in climatic experience, I never had even the slightest health problem during my stay in Loughborough.

**I have come to know that you had a university teaching assignment to your credit. How did you become a lecturer in a University Department?**

The passion for teaching was latent in me. Remember, my father and grandfather were teachers! It was manifested during my MPhil program in Loughborough. I had to take classes for British students in the university as part of the assignment. The teaching experience was a success. Even after coming to India, as part of imparting computer awareness among the staff of different departments, I had to take classes in training programs and workshops. So, when I came to know that a Department of Library and Information Science was being set up at Mahatma Gandhi University, Kottayam, I tried to get a lecturer post there on a deputation basis. It was allowed and I joined the Department of Library and Information Science as a lecturer in 1997. It was a nice experience. The deputation continued for four years. The students of those batches still commemorate their experiences through WhatsApp groups. The exposure to the foreign assignment greatly helped me in making the teaching meaningful and interesting. After the deputation, I returned to the Ministry.

**You participated in a project of the National Book Trust on the history of printing and publishing in India. Will you elaborate on how you worked with that?**

It was a grand project undertaken by a great scholar, Padma Shri BS Kesavan. I helped him in collecting, compiling, and translating the relevant materials concerned with the printing and publishing of Malayalam books. Shri BS Kesavan acknowledged my contribution by putting my name on the title page as part of the authorship. The entire work was quite exciting and improved my knowledge base.

**Now that you are retired, how are you utilizing the time?**

I retired in 2010. But I am still busy. On returning to my native village after retirement, I had to construct a house for my dwelling. It took much of my time. Now it is an aesthetically designed house. I have a son and a daughter. Their marriages were consecrated after my retirement. Then the births of grandchildren followed. I have three grandchildren. My son and daughter are settled elsewhere in their workplaces. So now only I and my wife are here in my home.

Nowadays, I am mostly engaged in reading and writing. I am engaged in social media as well. Recently I have translated an American novel based on the voyage of Vasco da Gama into Malayalam. It is ready for publication. Materials for writing two other books are being collected. So my mind is always active.

**What would you like to tell the youngsters of this generation?**

You should not be confined to academics only; you should also keep up-to-date on current affairs. From what I observe, nowadays there is no motivation for reading in youngsters. You should develop a habit of reading books, whether it be e-books or printed books. It will help you go a long way in your life. Also, you should not trust everything you see online. You should be able to distinguish the right and wrong information from the plethora of information reaching you through several sources. You should always keep your goals in mind and never forget to pursue them continuously for accomplishment. From my experience in life, I can tell you one sure thing, it is good to dream about your choices and of course, the right dream will be fulfilled. Finally, remember the ultimate advice given in Bhagavad Gita – Do your work diligently and sincerely, positive results beneficial to you and the society will naturally follow.

# Headline Projects



Electric vehicles (EVs) have emerged as a promising solution to combat climate change and reduce dependency on fossil fuels. Here we are describing the specifications and functionality of an electric vehicle equipped with a 1kW motor and a battery system with 5 transmission gears. The electric vehicle is powered by a 1kW motor, which serves as the primary source of propulsion. Despite its relatively low power output compared to conventional internal combustion engines, the motor's efficiency and torque characteristics make it suitable for urban commuting and short-distance travel. The vehicle's battery system is optimized for efficiency and performance, featuring a 5-gear setup. This setup allows for variable power delivery and energy management, enhancing the vehicle's overall range and adaptability to different driving conditions. The 5-gear configuration enables the vehicle to optimize power distribution and torque output across various driving scenarios. From steep inclines to

high-speed highways, the gearing system ensures optimal performance and energy utilization, enhancing both acceleration and efficiency.

By S8 EEE,  
ALWINPONNAN, ANANDHUP, ASWIN M, ASWIN RAMESH, SHYAM HARI



കട്ടച്ചിറ ഹെറാഗുരു ഇൻസ്റ്റിറ്റ്യൂട്ട് ഓഫ് ടെക്നോളജിയിലെ അവസാന വർഷ ഇലക്ട്രിക്കൽ ആൻഡ് ഇലക്ട്രോണിക്സ് എൻജിനീയറിങ് വിദ്യാർത്ഥികൾ ആക്രി സാധനങ്ങളുപയോഗിച്ച് നിർമ്മിച്ച വൈദ്യുത കാറുമായി അധ്യാപകർക്കൊപ്പം.

## 'ഇ - കാർ' ആക്രി

കറ്റാനം: ആക്രികൾക്കിടയിൽ നിന്ന് ശേഖരിച്ച സാധനങ്ങൾ ഉപയോഗിച്ച് ഇലക്ട്രിക് കാർ നിർമ്മിച്ച കട്ടച്ചിറ ഹെറാഗുരു ഇൻസ്റ്റിറ്റ്യൂട്ട് ഓഫ് ടെക്നോളജിയിലെ വിദ്യാർത്ഥികൾ. അവസാന വർഷ ഇലക്ട്രിക്കൽ ആൻഡ് ഇലക്ട്രോണിക്സ് എൻജിനീയറിംഗ് വിദ്യാർത്ഥികളാണ് കാർ നിർമ്മിച്ചത്.

പഴയ കാറിന്റെ എൻജിൻ ഉപയോഗിച്ച് നിർമ്മിച്ച വൈദ്യുത കാറിന്റെ ഡിസൈൻ.

ടെയ്ലർ സഹായങ്ങൾ ഉൾപ്പെടുത്തിയിട്ടുണ്ട്.

ഫുൾ ചാർജിൽ 200 കിലോമീറ്റർ ദൈർഘ്യം വഴിക്കുറച്ചെന്നും സ്റ്റാർട്ടിംഗ് കമ്പനി രൂപീകരിക്കാനുള്ള ശ്രമത്തിലാണെന്നും അവസാനവർഷ വിദ്യാർത്ഥികളായ ആൽവിൻ സിപോന്നൻ, അനന്ദു പ്രകാശ്, അശ്വിൻ രമേശ്, എം.അശ്വിൻ, കെ.എച്ച്.ശ്യാം ഹരി എന്നിവർ പറഞ്ഞു. കോഓർഡിനേറ്റർ

# Other Projects



*Medicine Transporting Drone*



*Modular BMS for Electricmotor cycle*



# MAHAGURU INSTITUTE OF TECHNOLOGY

Affiliated to the APJ Abdul Kalam Technological University , Thiruvananthapuram  
Approved by AICTE , New Delhi and Accredited by NAAC with B+ Grade  
NBA ACCREDITED PROGRAMME IN CSE



*Certificate Of Accreditation*

For

**B.TECH IN COMPUTER SCIENCE AND ENGINEERING**

By

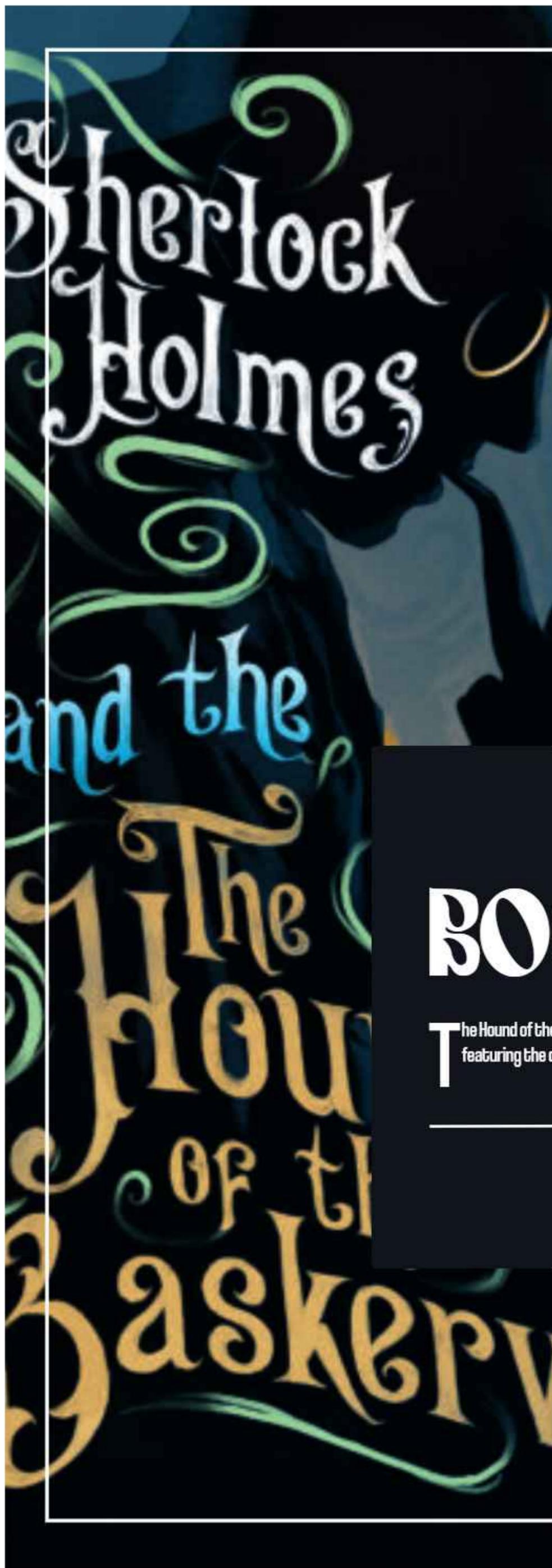


In a significant milestone for Mahaguru Institute of Technologies, the Computer Science and Engineering Department has been awarded accreditation by the National Board of Accreditation (NBA). This accreditation serves as a testament to the department's commitment to excellence in technical education and its adherence to industry-relevant standards. The NBA accreditation signifies that Mahaguru Institute of Technologies' Computer Science program meets rigorous quality benchmarks set by the accrediting body. It validates the program's curriculum, faculty expertise, infrastructure, and overall educational environment. For students, this accreditation ensures that they receive education of the highest caliber, preparing them effectively for careers in the rapidly evolving field of computer science.

The attainment of NBA accreditation is a result of the concerted efforts of both faculty members and students at Mahaguru Institute of Technologies. Faculty members have tirelessly worked towards designing and delivering a curriculum that not only imparts theoretical knowledge but also emphasizes practical applications and industry relevance. Their dedication to staying updated with the latest technological advancements has undoubtedly contributed to the program's success.

Moreover, students at Mahaguru Institute of Technologies have demonstrated exceptional commitment and enthusiasm in their academic pursuits. Their active participation in various extracurricular activities, research endeavors, and practical projects has enhanced the overall learning experience within the Computer Science Department. Their eagerness to learn and willingness to engage with challenging concepts have undoubtedly played a crucial role in achieving NBA accreditation.

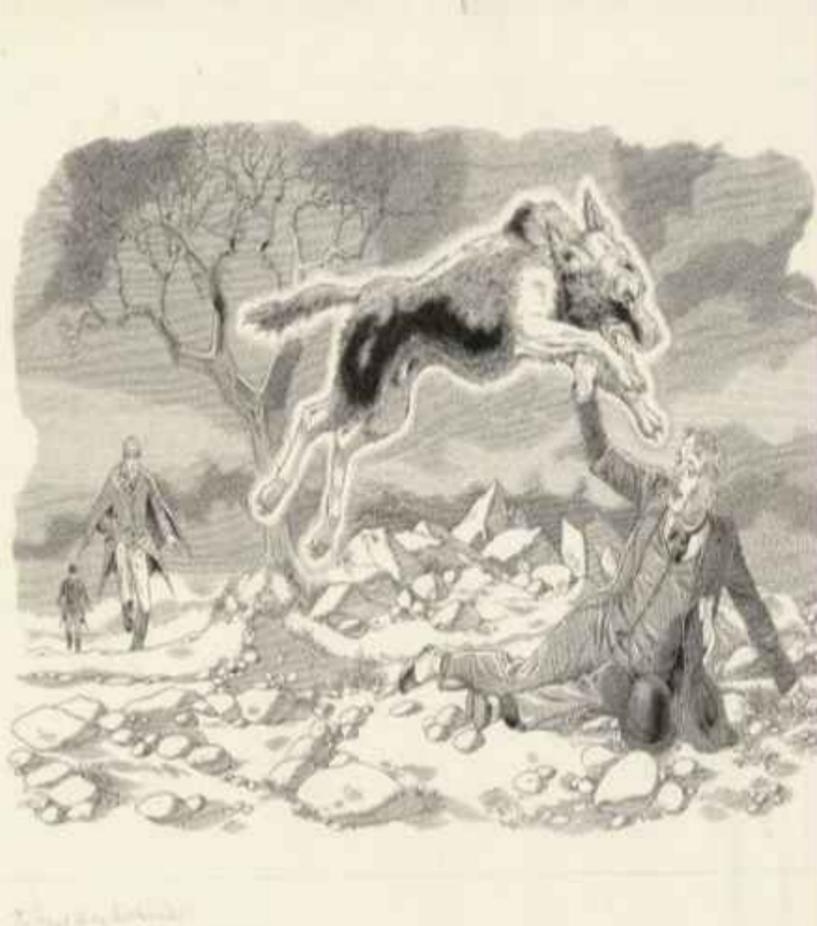
The accreditation by the NBA is poised to significantly enhance the reputation and credibility of Mahaguru Institute of Technologies' Computer Science Department. It not only reflects the department's dedication to maintaining high educational standards but also opens up opportunities for collaborations with industry partners. Employers can now be assured of the quality of graduates produced by the program, further strengthening the institute's placement record and alumni network.



# BOOK REVIEW

**T**he Hound of the Baskervilles is the third of the four crime novels by British writer Arthur Conan Doyle featuring the detective Sherlock Holmes.

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## “THE HOUND OF THE BASKERVILLES”

“The Hound of the Baskervilles” is a timeless classic that continues to captivate readers with its gripping mystery, memorable characters, and atmospheric setting. Written by Sir Arthur Conan Doyle, the novel is the third installment in the Sherlock Holmes series and is widely regarded as one of the greatest detective novels ever written. Set in the eerie moors of Devonshire, England, the story revolves around the mysterious death of Sir Charles Baskerville and the curse that haunts his family.

When Dr. James Mortimer seeks the help of Sherlock Holmes to investigate the death, Holmes sends his loyal companion Dr. John Watson to accompany Sir Henry Baskerville, the heir to the Baskerville estate, to Devonshire. As they delve deeper into the case, they uncover a web of secrets, lies, and deception that threatens to engulf them all. What sets “The Hound of the Baskervilles” apart is its masterful storytelling and atmospheric setting. Doyle’s vivid descriptions of the desolate moors create a sense of foreboding and unease that permeates the entire novel. The landscape itself becomes a character in its own right, adding depth and complexity to the story.



At the heart of the novel are the characters, Sherlock Holmes and Dr. Watson. Holmes, with his keen intellect and powers of deduction, is the epitome of the brilliant detective, while Watson serves as the loyal and steadfast companion who provides both emotional support and invaluable assistance in solving the

case. Their dynamic and their unwavering commitment to justice make them compelling protagonists who keep readers engaged from start to finish.

As the mystery unfolds, Doyle introduces a cast of intriguing secondary characters, each with their own motives and secrets. From the enigmatic Barrymores to the sinister Stapletons, each character adds layers to the story and keeps readers guessing until the very end. The plot twists and turns with unexpected revelations, leading to a thrilling climax that will leave readers on the edge of their seats. Beyond its compelling plot and well-drawn characters, “The Hound of the Baskervilles” also explores deeper themes such as greed, betrayal, and the consequences of past actions.

The curse that haunts the Baskerville family serves as a metaphor for the sins of the past that continue to haunt the present, adding a layer of complexity to the narrative.

In conclusion, “The Hound of the Baskervilles” is a masterpiece of detective fiction that has stood the test of time. With its atmospheric setting, compelling characters, and intricate plot, it continues to enthrall readers over a century after its initial publication. Whether you’re a longtime fan of Sherlock Holmes or new to the world of detective fiction, this novel is sure to leave a lasting impression.

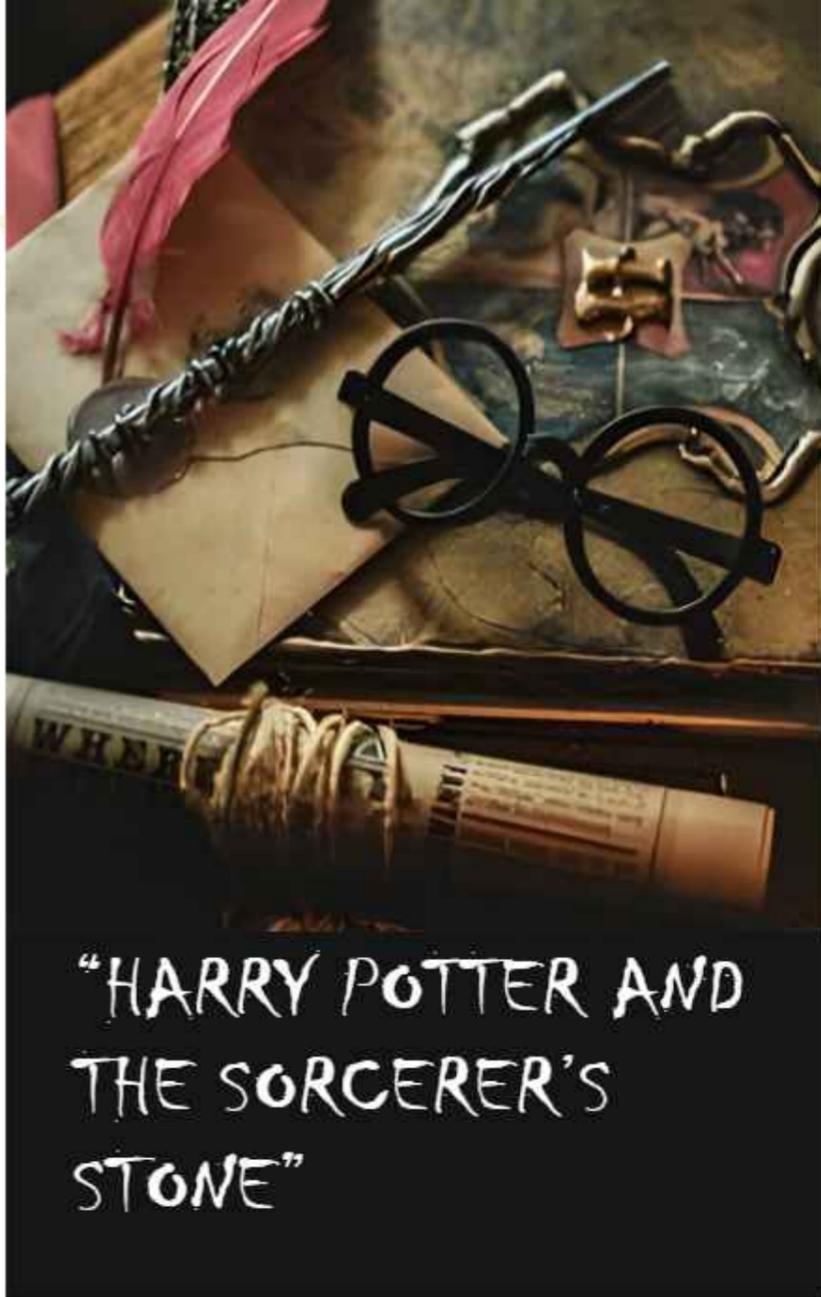
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S8 CSE





# BOOK REVIEW

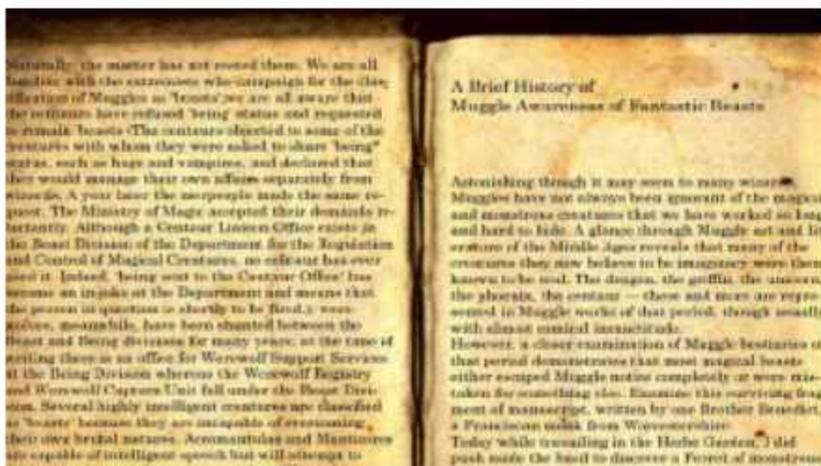
**H**arry Potter, an eleven-year-old orphan, discovers that he is a wizard and is invited to study at Hogwarts. Even as he escapes a dreary life and enters a world of magic, he finds trouble awaiting him



## "HARRY POTTER AND THE SORCERER'S STONE"

"Harry Potter and the Sorcerer's Stone" written by J.K. Rowling is a timeless tale that has captured the imagination of readers worldwide since its publication. The novel serves as a gateway to the enchanting world of Hogwarts School of Witchcraft and Wizardry, where magic is real, friendships are forged, and adventures abound. At the heart of the story is Harry Potter, a seemingly ordinary boy who discovers on his eleventh birthday that he is, in fact, a wizard. This revelation propels him into a world filled with wonder and danger, as he leaves behind his mundane life with the Dursleys to embrace his newfound identity. Alongside his loyal friends Ron Weasley and Hermione Granger, Harry navigates the challenges of wizarding school while unraveling the mysteries surrounding his parents' deaths and the dark wizard Voldemort who seeks to destroy him.

One of the novel's greatest strengths lies in Rowling's masterful world-building. From the bustling streets of Diagon Alley to the mystical halls of Hogwarts, the reader is transported to a place where magic is woven into the fabric of everyday life. Rowling's



vivid descriptions and attention to detail breathe life into the wizarding world, making it feel both fantastical and familiar. The characters in "Harry Potter and the Sorcerer's Stone" are equally captivating. Harry is a relatable protagonist, grappling with the weight of his destiny while yearning for a sense of belonging. Ron and Hermione, his steadfast companions, provide humor and loy-

alty in equal measure. From the wise headmaster Albus Dumbledore to the enigmatic Severus Snape, each character is imbued with depth and complexity, adding layers of intrigue to the story.

Beyond its magical elements, it also touches on deeper themes such as friendship, courage, and the power of love. Through Harry's journey, Rowling explores the bonds that unite us and the sacrifices we are willing to make for those we care about. The novel also addresses issues of prejudice and the abuse of power, particularly through the character of Voldemort and his followers, who seek to dominate the wizarding world through fear and oppression. One of the most remarkable aspects of the book is its universal appeal. While marketed as a children's book, "Harry Potter and the Sorcerer's Stone" resonates with readers of all ages, transcending generational boundaries. Rowling's accessible prose and engaging storytelling draw readers into the magical world she has created, fostering a sense of wonder and excitement that endures long after the final page is turned.

In conclusion, "Harry Potter and the Sorcerer's Stone" is a captivating tale that continues to enchant readers around the globe. With its richly imagined world, memorable characters, and timeless themes, it is no wonder that the novel has become a beloved classic. Whether you're embarking on your first journey to Hogwarts or revisiting old friends, this book is sure to cast a spell on you.

HIMA UDAYAN  
S2 ECE





# BOOK REVIEW

In a place and time not her own, one woman must risk everything to protect her life, her kingdom, and her heart. But life in ancient Britain isn't safe. The kingdom is fragmented, with enemies on all sides, and there's little chance for mercy if Britt's real identity and gender is exposed.



## King Arthur and Her Knights

King Arthur and Her Knights is a seven-book novel series written by K.M. Shea. This novel series renders the legend of King Arthur from a very different perspective. It features King Arthur as a woman from the future to be chosen as the leader of England using a special sword which was driven through a rock and can only be drawn out by a person who is pure, heart and soul.

The plot of the story revolves around how the main character, Britt, with the support of her few trustable people disguised as a man due to the stigmas of the olden time towards women taking leading positions, changes the attitude and view of everyone of that era with her modern thoughts and what she has read about Arthurian legends. It ends with Britt returning to the future and her friends' efforts and determination to find and meet her.

It has many humorous twists as well as adventure, romance, and bromance. The series is very enjoyable and it is at no point boring as it always has something coming around the corner. It's a fun read and a great way of entertainment. It opens to us a whole new wonderful realm with fun characters, funny and humorous situations, and heart-touching moments, taking us through an emotional roller coaster.

PVITHRA GANGA  
S8 ECE



# Bidirectional Charging: The Future of Electric Vehicles

Electric vehicles (EVs) are gaining popularity as a sustainable transportation option, offering reduced emissions and lower operating costs compared to traditional gasoline-powered vehicles. However, one of the challenges faced by the widespread adoption of EVs is the limited availability of charging infrastructure. Bidirectional charging technology has emerged as a promising solution to this issue, offering the potential to not only charge EVs but also to use their batteries to power homes and businesses.

Bidirectional charging, also known as vehicle-to-grid (V2G) technology, allows EVs to not only receive electricity from the grid but also to send power back to the grid. This two-way flow of electricity enables EV owners to not only charge their vehicles but also to use their batteries as a source of backup power during outages or peak demand periods. Additionally, bidirectional charging can help to balance the grid by providing additional energy storage capacity and reducing strain during peak load times.

One of the key benefits of bidirectional charging is its potential to increase the value proposition of EVs for consumers. By enabling EV owners to earn money by selling excess energy back to the grid, bidirectional charging can help offset the cost of owning an EV and make it a more attractive investment. This can also help to incentivize EV adoption and encourage more consumers to make the switch from gasoline-powered vehicles.

In addition to its economic benefits, bidirectional charging can also have significant environmental benefits. By enabling EVs to store renewable energy generated from sources such as solar and wind power, bidirectional charging can help to increase the integration of renewable energy into the grid and reduce greenhouse gas emissions. This can help to accelerate the transition to a cleaner and more sustainable energy system.

Despite its potential benefits, bidirectional charging technology is still in the early stages of development and deployment. One of the key challenges faced by the widespread adoption of bidirectional charging is the need for standardization among different EV models and charging infrastructure. Additionally, regulatory and policy barriers may need to be addressed to enable the widespread deployment of bidirectional charging technology.

Bidirectional charging, also known as vehicle-to-grid (V2G) technology, stands as the beacon illuminating the path to-

wards a more sustainable and integrated energy ecosystem. As electric vehicles (EVs) gain traction as a green alternative to traditional gasoline-powered cars, bidirectional charging emerges as a pivotal solution to overcome the hurdle of charging infrastructure limitations. This innovative technology enables EVs not only to draw power from the grid but also to return surplus energy back to it, effectively transforming these vehicles into mobile energy storage units.

By facilitating a two-way flow of electricity, bidirectional charging offers EV owners not just the means to charge their vehicles but also the opportunity to utilize their batteries as backup power sources during outages or peak demand periods. Moreover, bidirectional charging holds the promise of balancing the grid by augmenting energy storage capacity and alleviating strain during peak load times.

As we embark on this transformative journey, the integration of bidirectional charging technology not only enhances the value proposition of EVs for consumers but also fosters the seamless integration of renewable energy sources, propelling us toward a cleaner, more sustainable energy future.

The bidirectional charging technology has the potential to revolutionize the way we think about electric vehicles and energy storage. By enabling EVs to not only receive electricity from the grid but also to send power back, bidirectional charging can help to increase the value proposition of EVs, support renewable energy integration, and improve grid stability. As this technology continues to evolve and mature, it has the potential to play a key role in shaping the future of transportation and energy systems.

ASWIN M  
S8, EEE



# RELEVANCE OF TRANSFORMING ENGINEERS TO SUSTAINABLE ENGINEERS

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By creating environmentally friendly systems and technologies, maximizing resource use in manufacturing processes, putting waste-to-energy solutions into place, and creating robust infrastructure that can resist natural disasters and climate change, engineers can support sustainable development.

The process of becoming a sustainable engineer requires changing one's perspective and gaining new information and abilities pertaining to sustainability practices and concepts. Here's a road map to assist you in making this change:

**Educate Yourself:** Begin by familiarizing yourself with the fundamentals of sustainability, including life cycle assessment, renewable energy technology, green building architecture, and sustainable materials. Learn about sustainability in engineering with books and articles, workshops, and courses.

**Stay Informed:** Attend conferences, professional associations, and internet sites to stay abreast of the most recent advancements and best practices in sustainable engineering. Keep up with sustainability news and trends to learn about new opportunities and challenges. **Start Including Sustainability in Projects:** Start including sustainability issues in your engineering endeavors. Throughout the course of the project, this could entail encouraging social responsibility, cutting down on waste production, limiting environmental effects, and optimizing resource use.

**Work with specialists:** To obtain insights and viewpoints on sustainability issues pertinent to your field, collaborate with environmental scientists, urban planners, sustainability specialists, and other professionals. Multidisciplinary cooperation can result in creative fixes and comprehensive strategies for sustainability issues.

**Seek Certifications and Credentials:** If you're interested in a career in sustainable engineering, you should think about pursuing certifications and credentials like ISO 14001 for environmental management systems, LEED accreditation for green building design, or Envision sustainability professional certification for infrastructure projects.

**Encourage the Adoption of Sustainable Practices, Technologies, and Policies:** Encourage the adoption of sustainable practices, policies, and technologies within your industry and organization. Interact with stakeholders, bring attention to sustainability-related concerns, and support programs that further sustainability objectives.

**Continuously Improve:** By establishing goals, tracking your progress, and putting feedback systems in place,

you can continually assess and enhance your performance in terms of sustainability. Adopt an innovative and forward-thinking mindset to promote positive change and a more sustainable future.

**Lead by Example:** Set an example for others to follow by acting and making choices that reflect your commitment to sustainability. Encourage and enable others to adopt sustainable practices and ideas in their daily lives and at work.

**Remain humble and open-minded:** Understand that there is always more to learn and develop in the topic of sustainability, which is a complicated and dynamic one. Remain modest, responsive, and open to fresh insights, criticism, and viewpoints from a variety of stakeholders.

**Be Patient and Persistent:** Making the switch to sustainable engineering may need some time and effort, and there may be obstacles to overcome. In your quest for sustainability, remember to be patient, tenacious, and resilient, knowing that your actions will help shape a brighter future for both the earth and humankind.

Through your work as a sustainable engineer, you may significantly impact the advancement of social justice, economic success, and environmental stewardship by adhering to these guidelines and adopting sustainability as a key principle in your engineering practice.

PREETHY P  
1st year  
M.Tech



# Empowering Women: The Divine Force for Collective Growth and Prosperity

**T**he feminine form embodies the Mother Divine, and in India, we revere Devi as the Shakti, or primary force or energy, underlying all that is manifested and unmanifested. We also think that if you maintain the happiness of the Sree-श्री (women) in your home, you will witness numerous expressions of her contentment, such as a contented family, wealth, and numerous other qualities. A woman is said to create a "house" for herself.

In keeping with the UN's theme for this year, "Invest in Women, Accelerate Growth," I believe that we live in a wonderful time where women are accepted for who they are. As such, treating women well at home and at work may have long-term effects on the general well-being of a group, family, society, and country. Children of educated mothers gain advantages in the early years, such as improved cognitive skills and a head start in life.

In addition, there are a lot of female executives that defy the notion that they can't be the best in their fields—the media, technology, healthcare, education, or any other sector. A number of initiatives, including Beti Bachao Beti Padhao (Educate Girl Child), Bhamashah Yojana (where women are seen as Heads of Family), Sukanya Samridhi Yojana (Financial Benefit to a Girl Child), and Ujjwala 2.0 (New Gas connections for Rural Women), have been launched in India by our beloved PM Modi to support and encourage the growth and well-being of women.



**EMPOWERING**  
*Women Alliance*

*Authentically Self-Expressed. Unapologetically Powerful.*



In order to ensure that we build strong foundations for our future generations, let's make a commitment to the cause of investing our time and energy in uplifting women around us, whether they take the form of a mother, wife, sister, friend, or colleague, starting this year.

Women are the embodiment of the divine feminine, which is revered in India as the universe's driving force. Mothers with education support their children's cognitive growth, which helps them succeed. Many female leaders today have dispelled prejudices in a variety of industries, illustrating how gender roles are evolving.



**SREETI GANGADHARAN**  
ASSTANT PROFESSOR  
S & H DEPARTMENT



# The Evolution of Programming Languages

**P**rogramming languages have evolved from early machine languages and assembly languages to more human-readable and abstract forms, such as procedural languages like Fortran and Cobol, which introduced the concept of writing instructions in a more human-readable format.

Structured programming in languages like C further enhanced code readability and maintainability by introducing constructs like loops and conditionals. Object-oriented programming, popularized by languages like C++ and Java, brought the concepts of classes and objects, promoting code reusability and modularity. Scripting languages like Python and Perl focused on rapid prototyping and automation, featuring dynamic typing and high-level data structures.

Functional programming languages such as Lisp and Haskell emphasized functions as the primary building blocks, promoting immutability and avoiding side effects. Recent trends include languages like Rust and Swift, which prioritize performance, safety, and modern software development practices, reflecting the ongoing evolution in programming language designed towards greater expressiveness, safety, and efficiency.

ATHIRA V  
S4 CSE



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# Tracing the Evolution of Artificial Intelligence: A Journey through Innovation

**A**rtificial Intelligence (AI) has undergone a remarkable evolution since its inception, evolving from theoretical concepts to practical applications that permeate nearly every aspect of modern life. This evolutionary journey spans decades and is marked by significant breakthroughs, challenges, and transformative advancements. From its humble beginnings rooted in mathematical theory to its current state as a powerful tool driving technological innovation, the evolution of AI reflects humanity's relentless pursuit of understanding and replicating intelligence.

The genesis of AI can be traced back to the mid-20th century, a time when scientists and mathematicians began exploring the possibility of creating machines capable of mimicking human intelligence. One of the earliest milestones in this journey was the development of the Turing Test by British mathematician Alan Turing in 1950. This test proposed a criterion for determining whether a machine could exhibit intelligent behavior indistinguishable from that of a human. While the Turing Test sparked significant interest in the field, early attempts at AI were limited by the computational power and lack of sophisticated algorithms. The 1950s and 1960s witnessed the birth of several foundational concepts in AI, including symbolic reasoning and logical inference. Researchers such as John McCarthy, Marvin Minsky, and Herbert Simon made pioneering contributions to the field, laying the groundwork for the development of expert systems and rule-based AI. These early AI systems were primarily rule-based, relying on predefined sets of rules and logical reasoning to perform specific tasks. While they demonstrated the potential of AI, they were often brittle and struggled to handle uncertainty or complex real-world scenarios.

The 1970s and 1980s heralded the era of knowledge-based systems and the emergence of symbolic AI as a dominant paradigm. Expert systems, which encoded human expertise in the form of rules and heuristics, gained traction in various domains such as medicine, finance, and engineering. However, the limitations of symbolic AI became increasingly apparent as researchers encountered difficulties in scaling these systems to handle large amounts of data and adapt to dynamic environments. This led to the resurgence of interest in connectionism and neural networks, inspired by the biological brain's ability to learn and adapt. The late 20th century witnessed significant breakthroughs in neural network research, fueled by advances in computational power and the development of back propagation algorithms for



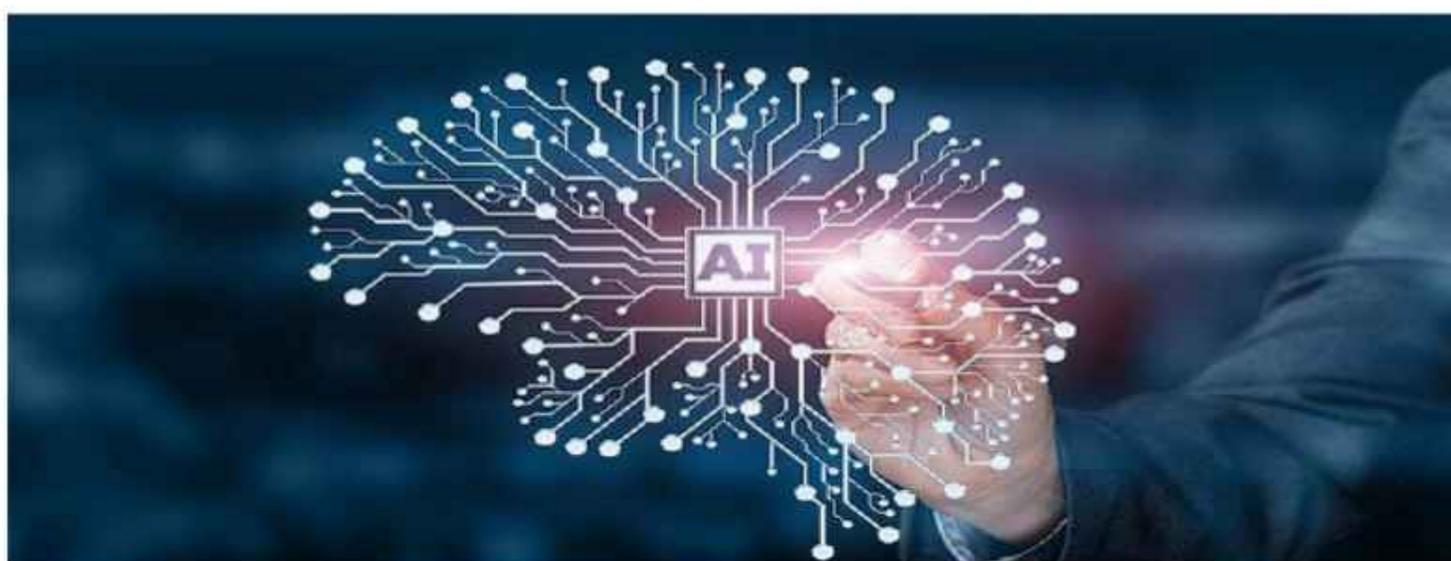
AVANI AJJUMAR  
S4 AI

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training multi-layer perceptrons. This period saw the rise of connectionist approaches to AI, with neural networks demonstrating remarkable capabilities in tasks such as pattern recognition, speech recognition, and machine translation. The success of neural networks reignited optimism in the field of AI and laid the foundation for the deep learning revolution of the 21st century.

The dawn of the 21st century marked a paradigm shift in AI, propelled by the convergence of big data, powerful hardware, and sophisticated algorithms. Deep learning, a subfield of machine learning based on artificial neural networks with multiple layers of abstraction, emerged as the dominant approach in AI research. Breakthroughs in deep learning algorithms, such as convolutional neural networks (CNNs) and recurrent neural networks (RNNs), revolutionized fields rang-

productivity, and improving decision-making processes. However, the rapid proliferation of AI has also raised significant ethical, societal, and economic concerns. Issues related to data privacy, algorithmic bias, job displacement, and autonomous weapons have sparked debates about the responsible deployment and regulation of AI technologies. Addressing these challenges requires interdisciplinary collaboration and a comprehensive approach to AI governance that balances innovation with ethical considerations and human values. Looking ahead, the evolution of AI is poised to continue at an unprecedented pace, driven by ongoing research breakthroughs, technological advancements, and the growing demand for intelligent systems. Future frontiers of AI research include explainable AI, lifelong learning, AI ethics, and the quest for artificial general intelligence (AGI) – a form of AI that can



ing from computer vision and natural language processing to autonomous vehicles and robotics. The proliferation of data-driven approaches to AI has been accompanied by significant advances in computational infrastructure, enabling the training of increasingly complex models on vast datasets. Cloud computing platforms, parallel processing architectures, and specialized hardware accelerators, such as graphics processing units (GPUs) and tensor processing units (TPUs), have played a crucial role in driving the scalability and efficiency of deep learning algorithms. In parallel with advances in deep learning, other branches of AI have continued to evolve, including reinforcement learning, evolutionary algorithms, and hybrid approaches combining symbolic reasoning and statistical learning. Reinforcement learning has gained prominence in the domain of autonomous agents and robotics, enabling machines to learn optimal behaviors through interaction with their environment and feedback from rewards. The widespread adoption of AI across industries has led to transformative applications in fields such as healthcare, finance, transportation, and entertainment. AI-driven technologies, including virtual assistants, recommendation systems, predictive analytics, and autonomous systems, are reshaping business models, enhancing

understand, learn, and adapt across a wide range of tasks and domains. In conclusion, the evolution of artificial intelligence represents a remarkable journey of human ingenuity and innovation, spanning decades of scientific exploration and technological advancement. From its theoretical origins to its current state as a pervasive force in society, AI continues to push the boundaries of what is possible and holds the promise of unlocking new opportunities to address some of humanity's most pressing challenges. As we navigate the complexities of an AI-powered world, it is essential to approach the development and deployment of AI with foresight, responsibility, and a commitment to harnessing its potential for the benefit of all. Applications of Artificial Intelligence First of all, AI has significant use in healthcare. Companies are trying to develop technologies for quick diagnosis. Artificial Intelligence would efficiently operate on patients without human supervision. Such technological surgeries are already taking place. Another excellent healthcare technology is IBM Watson. Artificial Intelligence in business would significantly save time and effort. There is an application of robotic automation to human business tasks. Furthermore, Machine learning algorithms help in better serving customers. Chatbots provide immediate response and service to customers.

# Powering the Future: Next Generation Energy Solutions

As the world grapples with the challenges of climate change and energy security, the quest for next-generation energy solutions has never been more critical. From renewable sources to innovative technologies, engineers and scientists are pioneering new approaches to meet the growing demand for clean, sustainable energy. Renewable energy sources such as solar, wind, and hydroelectric power are experiencing a remarkable surge in adoption worldwide. Advances in solar panel efficiency, wind turbine design, and grid integration technologies have made renewable energy more cost-effective and scalable than ever before. With declining costs and growing investments, renewable sources are poised to become the dominant source of electricity in the coming decades, reducing carbon emissions and mitigating the impacts of climate change.



One of the key challenges faced by renewable energy adoption is intermittency – the variability of solar and wind power generation. Energy storage technologies play a crucial role in addressing this challenge by storing excess energy during periods of high production and releasing it when needed. Lithium-ion batteries have emerged as the leading energy storage solution, with ongoing research focused on improving their efficiency, longevity, and sustainability. Additionally, emerging technologies such as flow batteries, hydrogen storage, and thermal energy storage hold promise for large-scale, grid-level storage applications, enabling greater integration of renewables into the energy mix.

The evolution of smart grid technologies is revolutionizing the way electricity is generated, distributed, and consumed. By empowering consumers to monitor and

manage their energy usage in real-time, smart grids promote energy efficiency and reduce wastage. Furthermore, smart grid innovations enable the seamless integration of distributed energy resources such as rooftop solar panels, electric vehicles, and home energy storage systems, creating a more resilient and sustainable energy infrastructure. Beyond conventional renewable sources, a wave of emerging technologies is poised to disrupt the energy sector. Hydrogen fuel cells offer a clean, versatile energy source with applications ranging from transportation to industrial processes. Meanwhile, innovative approaches such as artificial photosynthesis, geothermal energy extraction, and ocean energy harvesting offer alternative pathways to sustainable energy production, expanding the possibilities for a diverse and resilient energy future.

From renewable energy sources and energy storage innovations to smart grids and emerging technologies, the transition towards a sustainable energy future is well underway. By harnessing the power of innovation, collaboration, and investment, we can accelerate this transition and build a cleaner, more prosperous world for future generations. As we embark on this journey, let us seize the opportunities presented by next-generation energy solutions to shape a brighter, more sustainable future for all.

**Dr. Manju J.**  
**Vice Principal**



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# DNA

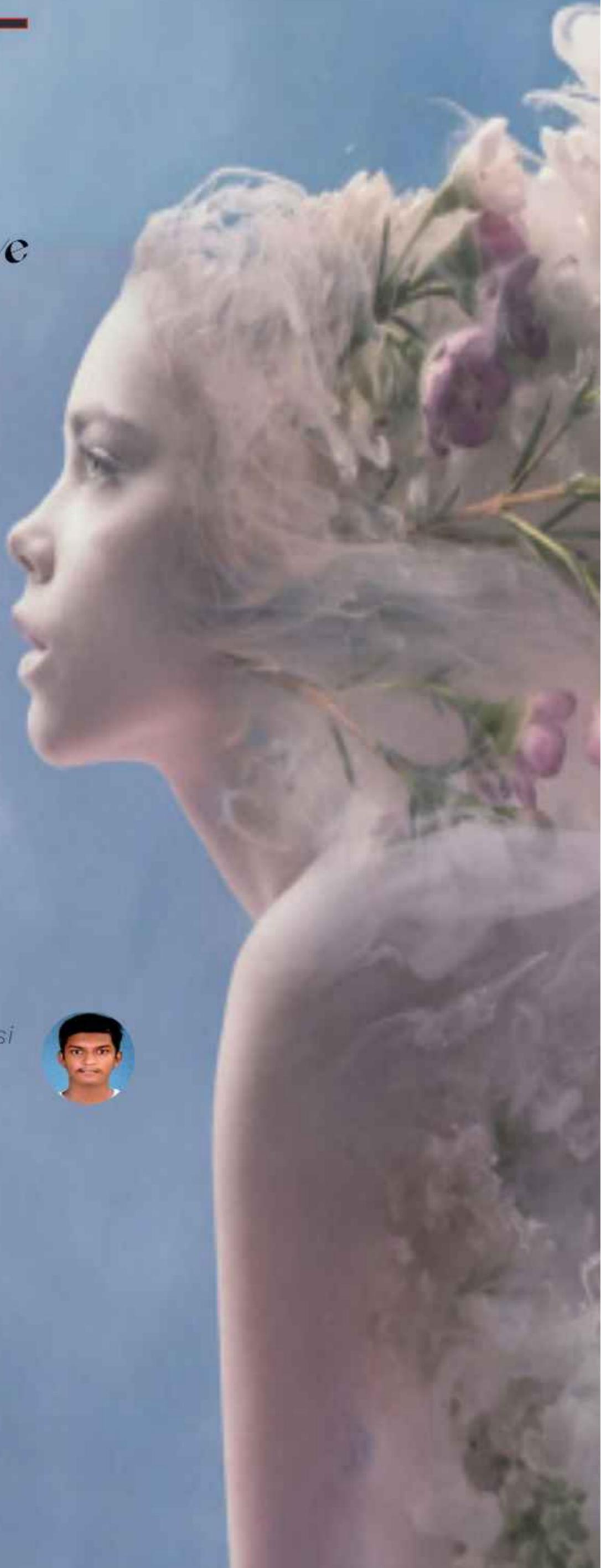
## *Dream. Nurture. Achieve*

Dreams! They are the blueprints of our aspirations, containing the potential for groundbreaking discoveries and innovations. But turning dreams into reality isn't easy. It takes a lot of hard work and perseverance. With unwavering resilience and conscious determination, we can make our dreams come true.

Nurture! It's not enough to simply wish to fulfill our dreams; we must actively nurture them with unwavering dedication and boundless enthusiasm. It involves immersing ourselves wholeheartedly in our passion, recognizing that every setback is an opportunity for growth and every challenge is a chance to refine our vision. As we tend to our dream with love and dedication, we witness its transformation from a mere idea into a powerful force capable of shaping our destiny.

Achieving! Our dreams are more than just reaching a goal; it is not about reaching the destination, measuring the success. It's the journey itself that defines our achievement. Each step taken towards our goal, every obstacle we overcome, and every lesson learned along the way contributes to our growth and fulfillment.

*Karthik Bhasi*  
*S2 ME*

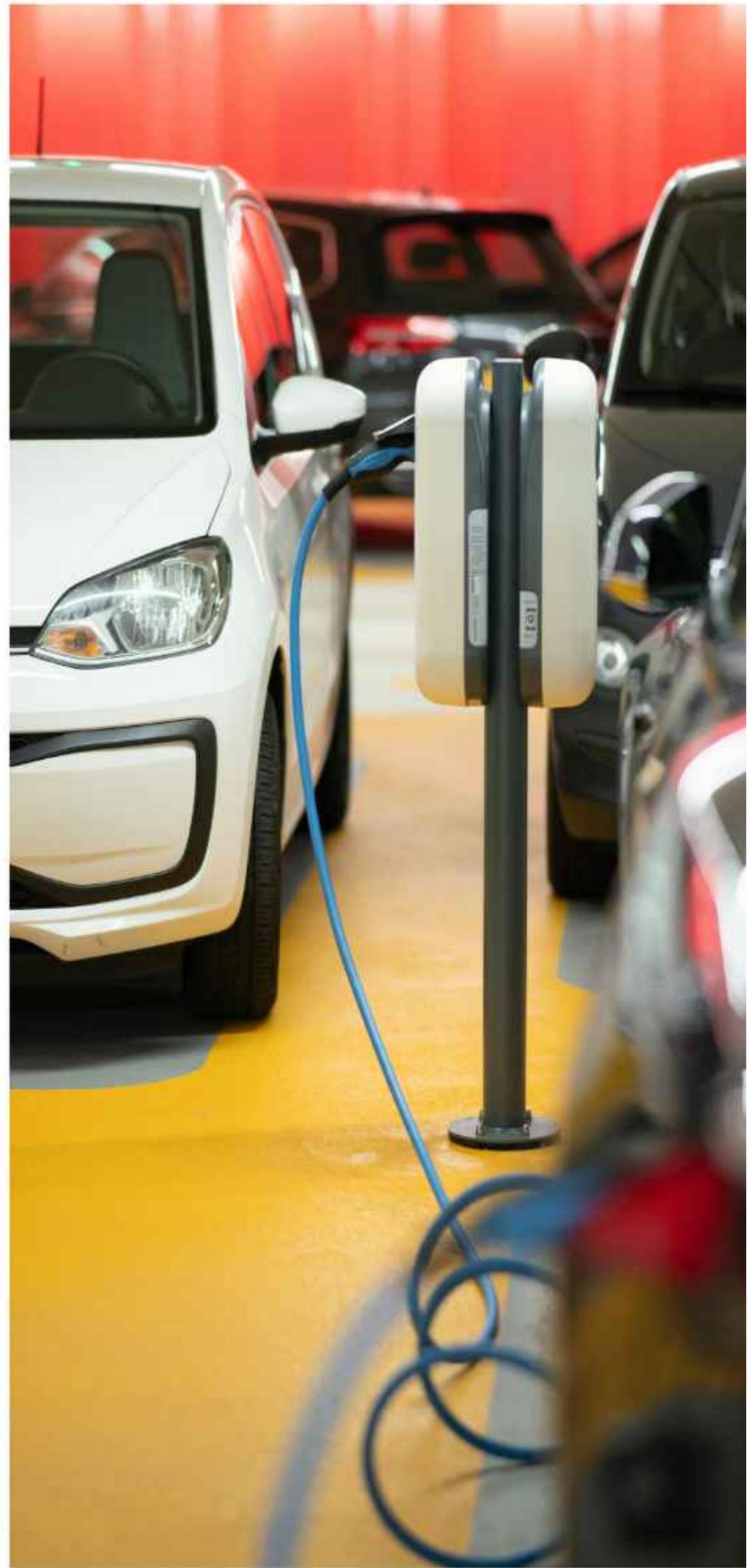


# Revolutionizing Mobility: The Rise of Wireless Charging for Electric Vehicles



In the modern world, the automotive industry is undergoing a significant transformation with the increasing adoption of electric vehicles (EVs). One of the key advancements in this space is the development of wireless charging technology for EVs, which is revolutionizing the way we power our vehicles. Wireless charging eliminates the need for physical cables and plugs, making the charging process more convenient and seamless for EV owners. This technology works by transferring power from a charging pad on the ground to a receiver installed on the vehicle, allowing for efficient and effortless charging without the hassle of plugging in. The benefits of wireless charging for EVs are numerous. It offers a more user-friendly experience, as drivers no longer have to worry about finding a charging station or dealing with tangled cords. Additionally, wireless charging is safer and more reliable than traditional charging methods, reducing the risk of accidents and electrical hazards.

Moreover, wireless charging promotes sustainability by enabling EVs to be charged using renewable energy sources such as solar power. This not only reduces carbon emissions but also contributes to a cleaner and greener environment. As the demand for EVs continues to grow, wireless charging technology is poised to play a crucial role in shaping the future of transportation. With ongoing advancements and investments in this field, we can expect to see widespread adoption of wireless charging infrastructure in the coming years, further accelerating the transition towards a sustainable and electrified transportation system.



In recent years, the automotive industry has witnessed a remarkable shift towards electric vehicles (EVs) as a sustainable and environmentally friendly mode of transportation. Central to this transition is the development and adoption of wireless charging technology, which is poised to revolutionize the way we power our vehicles and shape the future of mobility. Wireless charging offers a host of advantages over traditional plug-in charging methods, making it an attractive option for EV owners. One of the key benefits is the convenience and ease of use it provides. With wireless charging, drivers no longer have to struggle with cumbersome cables and plugs, simplifying the charging process and making it more user-friendly.

This seamless experience not only enhances the overall driving experience but also encourages more people to switch to electric vehicles. Furthermore, wireless charging promotes safety and reliability in EV charging. By eliminating the need for physical connections, wireless charging reduces the risk of accidents and electrical hazards associated with traditional charging methods. This not only enhances the overall safety of EV owners but also contributes to building trust and confidence in electric vehicle technology.

In addition to convenience and safety, wireless charging also offers significant environmental benefits. By enabling EVs to be charged using renewable energy sources such as solar power, wireless charging helps reduce carbon emissions and promote sustainability. This aligns with the global push towards de-carbonisation and a cleaner, greener future for transportation. As the demand for electric vehicles continues to rise, the need for efficient and convenient charging solutions becomes increasingly important. Wireless charging technology is well-positioned to meet this demand by providing a reliable, user-friendly, and sustainable solution for powering EVs. With ongoing advancements in infrastructure and technology, we can expect to see a widespread deployment of wireless charging systems in public spaces, homes, and workplaces, further accelerating the adoption of electric vehicles.

In wireless charging for electric vehicles represents a pivotal advancement in the automotive industry, offering a transformative solution for powering our vehicles in a safe, convenient, and sustainable manner. As this technology continues to evolve and gain, it holds immense potential to reshape the future of mobility and drive us towards a cleaner, more efficient transportation system.

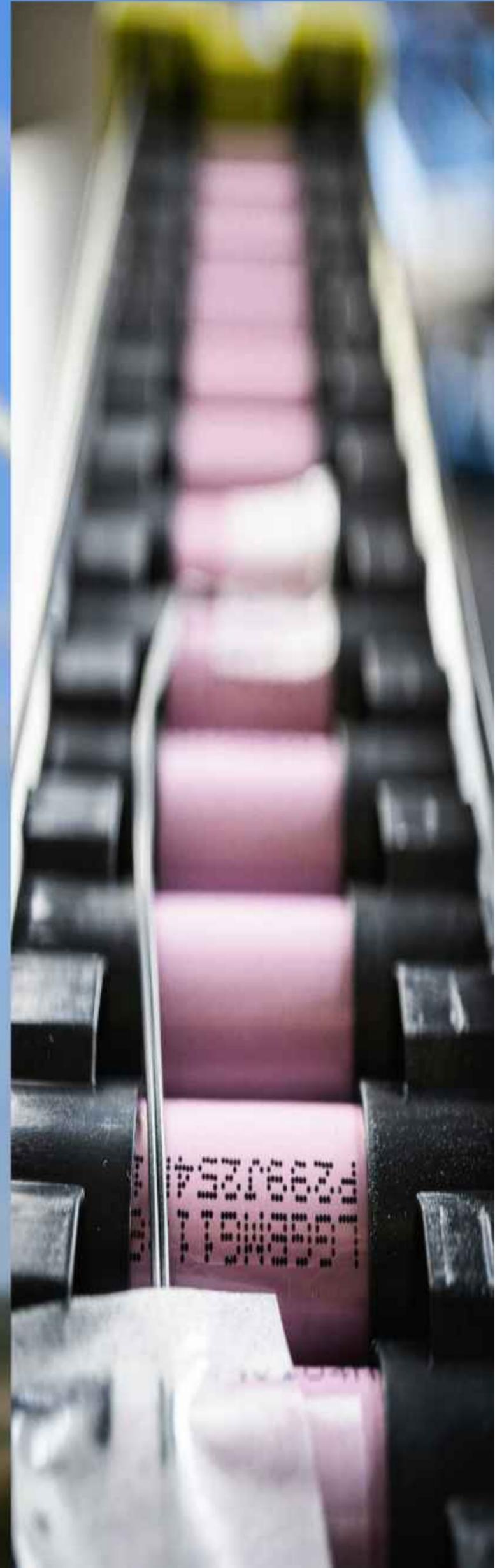
ABHILASH  
S8, EEE



# REVOLUTIONIZING BATTERY SUSTAINABILITY : AN INNOVATIVE APPROACH TO RECYCLING POWER CELLS



Used lithium-ion batteries from cell phones, laptops and a growing number of electric vehicles are piling up, but options for recycling them remain limited mostly to burning or chemically dissolving shredded batteries. The current state of the art methods can pose environmental challenges and be difficult to make economical profit at the industrial scale. The conventional process recovers few of the battery materials and relies on caustic, inorganic acids and hazardous chemicals that may introduce impurities. It also requires complicated separation and precipitation to recover the critical metals. However, recovering metals such as cobalt and lithium could reduce both pollution and reliance on foreign sources and choked supply chains. Researchers at the Department of Energy's Oak Ridge National Laboratory have improved on approaches that dissolve the battery in a liquid solution in order to reduce the amount of hazardous chemicals used in the process. This simple, efficient and environmentally-friendly solution developed by ORNL researchers overcomes the main obstacles presented by previous approaches. The spent battery is soaked in a solution of organic citric acid – which occurs naturally in citrus fruits – dissolved in ethylene glycol, an antifreeze agent commonly used in consumer products like paint and makeup. Citric acid comes from sustainable sources and is much safer to handle than inorganic acids. This green solution produced a strikingly efficient separation and recovery process for the metals from the positively-charged electrode of the battery, called the cathode.



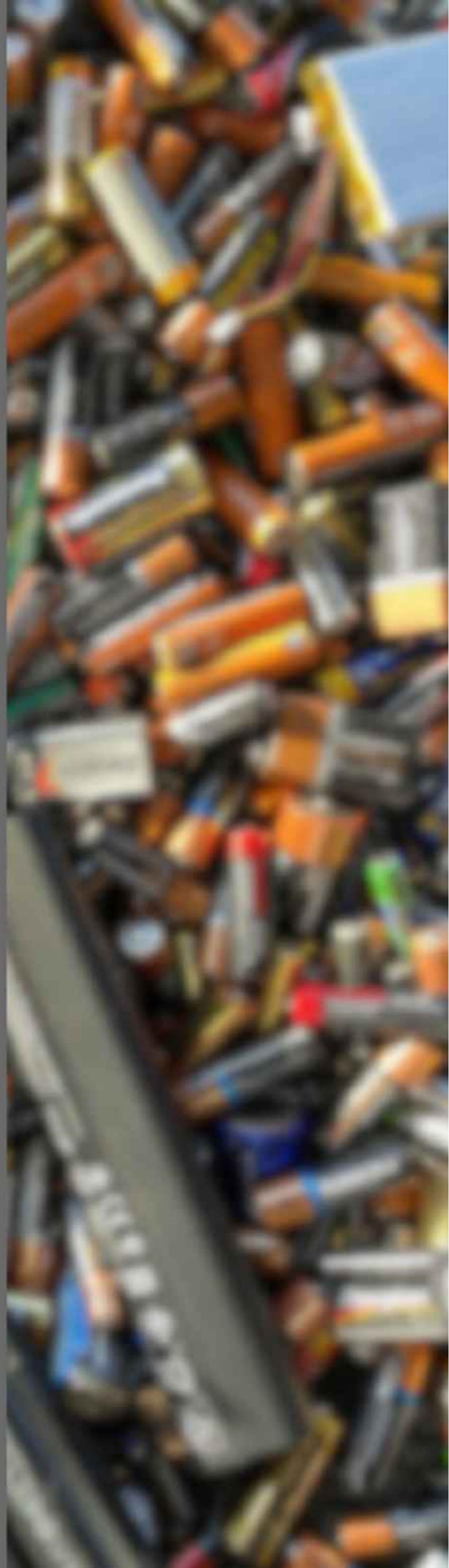
The recycling technique developed there leached nearly 100% of the cobalt and lithium from the cathode without introducing impurities in the system. It also enabled efficient separation of the metal solution from other residues. Most importantly, it served a second function by recovering over 96% of the cobalt in a matter of hours, without the typical addition of more chemicals in what is usually a tricky process of manually balancing acid levels. One of the key advantages of this new method is its ability to minimize waste and environmental impact. By optimizing the recycling process and reducing the use of hazardous chemicals, it offers a more sustainable alternative to traditional approaches.

Additionally, the recovered materials can be reintegrated into the manufacturing of new batteries, closing the loop and further reducing the reliance on virgin resources. Moreover, this method is not only environmentally friendly but also economically viable. By streamlining the recycling process and maximizing resource recovery, it presents a cost effective solution for battery manufacturers and recyclers alike.

This economic feasibility is essential for ensuring widespread adoption and scalability, ultimately driving the transition towards a circular economy for batteries. Furthermore, the scalability and versatility of this new method make it suitable for a wide range of battery types, including lithium-ion batteries commonly used in electric vehicles, portable electronics, and renewable energy storage systems. This universality underscores its potential to address the growing challenge of battery waste while supporting the rapid electrification of various sectors. The development of this new method for recycling batteries represents a significant step forward in the quest for sustainable energy solutions. By combining innovation with environmental stewardship and economic viability, it offers a promising pathway towards a circular economy for batteries. As we strive to build a more sustainable future, initiatives like this play a crucial role in minimizing waste, conserving resources, and mitigating the environmental impact of our technological advancements.



VISHNU S NAIR  
S8 EEE



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# UNVEILING THE IMPACTS OF DEEPPFAKE TECHNOLOGY

**I**n recent years, advancements in artificial intelligence have given rise to a concerning phenomenon known as deepfake technology. Deepfakes are digitally altered videos or images that use sophisticated AI algorithms to manipulate and superimpose faces onto other bodies, creating highly realistic but entirely fabricated content.

While deepfake technology has shown potential for entertainment and creative expression, its widespread accessibility poses significant risks and challenges, particularly in misinformation, privacy invasion, and cybersecurity. One of the most alarming effects of deepfake technology is its potential to spread misinformation and manipulate public discourse.

With the ability to fabricate convincing videos of public figures saying or doing things they never actually did, deepfakes have the power to undermine trust in the media and sow confusion among the general public.

Political leaders, celebrities, and other prominent figures are particularly vulnerable targets, as deepfake videos can be used to spread false information, incite violence, or damage reputations with devastating consequences.

Moreover, deepfakes have the potential to erode trust in visual evidence and exacerbate existing issues of disinformation and fake news. As deepfake technology becomes more sophisticated and accessible, distinguishing between genuine and manipulated content becomes increasingly challenging, leading to a crisis of authenticity in the digital age. This erosion of trust in the veracity of online content can have far-reaching implications for democracy, journalism, and public discourse, undermining the foundations of an informed and accountable society.

In addition to its implications for misinformation, deepfake technology also raises significant concerns regarding privacy invasion and consent. The ability to create realistic videos using only a few photographs or video clips raises questions about the ethics of using someone's likeness without their permission.

Deepfake videos have already been used to create non-consensual pornography, cyberbullying, and harassment, infringing upon the rights and dignity of individuals and perpetuating harmful stereotypes and narratives.





Furthermore, the proliferation of deepfake technology poses serious cybersecurity risks, as malicious actors can exploit the technology to conduct fraud, espionage, or cyberattacks. Deepfake videos can be used to impersonate individuals in sensitive contexts, such as corporate boardrooms or government agencies, leading to identity theft, financial fraud, or even national security threats.



As deepfake technology continues to evolve, it is imperative that cybersecurity measures are strengthened to mitigate the risks posed by malicious actors seeking to exploit the technology for nefarious purposes.

While deepfake technology holds promise for entertainment and creative expression, its widespread adoption poses significant risks and challenges for society. From misinformation and privacy invasion to cybersecurity threats, the impacts of deepfake technology are far-reaching and multifaceted.

As we navigate the complex ethical, legal, and technological implications of deepfakes, it is essential that we work together to develop robust strategies and safeguards to protect against their harmful effects and uphold the integrity of our digital world.

ATHIRA S  
S2 AI/ML



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# Futuristic delivery on wings

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In recent years, the landscape of logistics and transportation has witnessed a significant transformation with the emergence of drone delivery systems. Once the stuff of science fiction, drones are now becoming an integral part of the supply chain, promising, faster, more efficient, and environment-friendly delivery solutions. This article explores the burgeoning field of drone delivery systems, its potential benefits, challenges, and future implications for various industries.

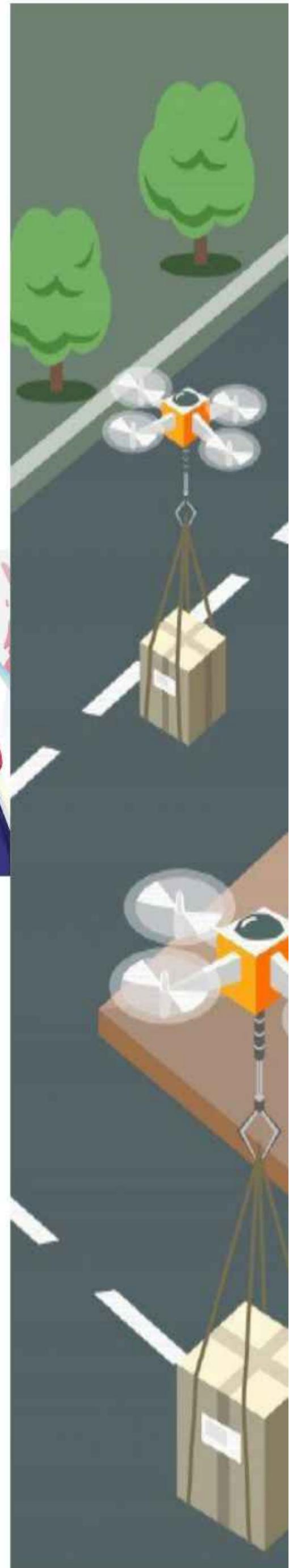
Drones were initially introduced as military/police equipment and were used primarily for surveillance and monitoring against any targeted attacks. The application and usage of this technology has since evolved to include various other labor-intensive and complex tasks across industries. These include identifying defects in oil/gas pipelines, checking the health of crops, identifying hotspots in fire situations, surveillance for mining and construction activities, cinematography, delivering packages, etc. Drone delivery systems have gained traction across industries, from e-commerce giants to healthcare providers and emergency services.

The allure of drone lies in their ability to navigate through congested urban areas, by-passing traffic and delivering packages swiftly to customers' doorsteps. Companies like Amazon, UPS, and Google's Wing have invested heavily in drone technology, conducting pilot programs and trials to assess the feasibility and scalability of drone delivery.

During the COVID-19 pandemic, drones made medical deliveries of personal protective equipment and COVID-19 tests in the United States, Israel, and Ghana. In partnership with the Ghana Ministry of Health, Zipline drones delivered thousands of COVID-19 vaccine vials in Ghana during 2020 and 2021. University of British Columbia (UBC) has selected Drone Delivery Canada Corp for UBC's "Remote Communities Drone Transport Initiative" program. This solution will be used to transport a variety of cargo for the benefit of the Stellat'en First Nation, located in the Fraser Lake area of Central Northern British Columbia.

The use of drone technology and drones for delivery is inevitable. Soon, multiple industries will leverage drone technology to bring innovation to their business areas, including surveillance, research, last-mile delivery, etc. E-commerce giants have been at the helm of research, development, and filing patents in drone technology since 2005.

They continue to be invested in this space and are focused on bringing down the cost of operations in last-mile delivery, improving delivery time, and integrating drone technology with mobile phone applications to provide better user experiences. Drone delivery services will only grow in the coming years, and companies will need to stay invested in drone delivery programs and technology enhancements before realizing operational growth and cost benefits.





Drones can traverse extensive distances in remarkably brief timeframes, which is particularly advantageous for urgent or time-sensitive deliveries. While traditional delivery methods often contend with traffic jams and congested routes, drones effortlessly soar over these obstacles, guaranteeing swift deliveries that meet the most pressing deadlines. By eliminating the need for a human delivery driver and minimizing fuel consumption, drone delivery systems contribute to reduced operational expenses. Furthermore, their adept maneuverability in dense urban environments results in further cost savings, as they can navigate efficiently through crowded streets and tight spaces.

Electric-powered drones emit substantially fewer carbon emissions compared to traditional delivery vehicles, reducing their environmental footprint. This shift towards cleaner and more responsible transportation methods aligns with the growing demand for green, sustainable logistics, making drone deliveries an attractive option for environmentally conscious businesses and consumers.



*Alaap S Nair*  
S8,EEE



Drone delivery systems represent a paradigm shift in the field of logistics, offering unprecedented speed, efficiency, and sustainability. While challenges remain, the potential benefits are too significant to ignore. With concerted efforts from industry stakeholders, regulators, and the public, drone delivery systems have the potential to reshape the future of transportation and redefine the way goods are delivered worldwide.



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# Technology And Innovation

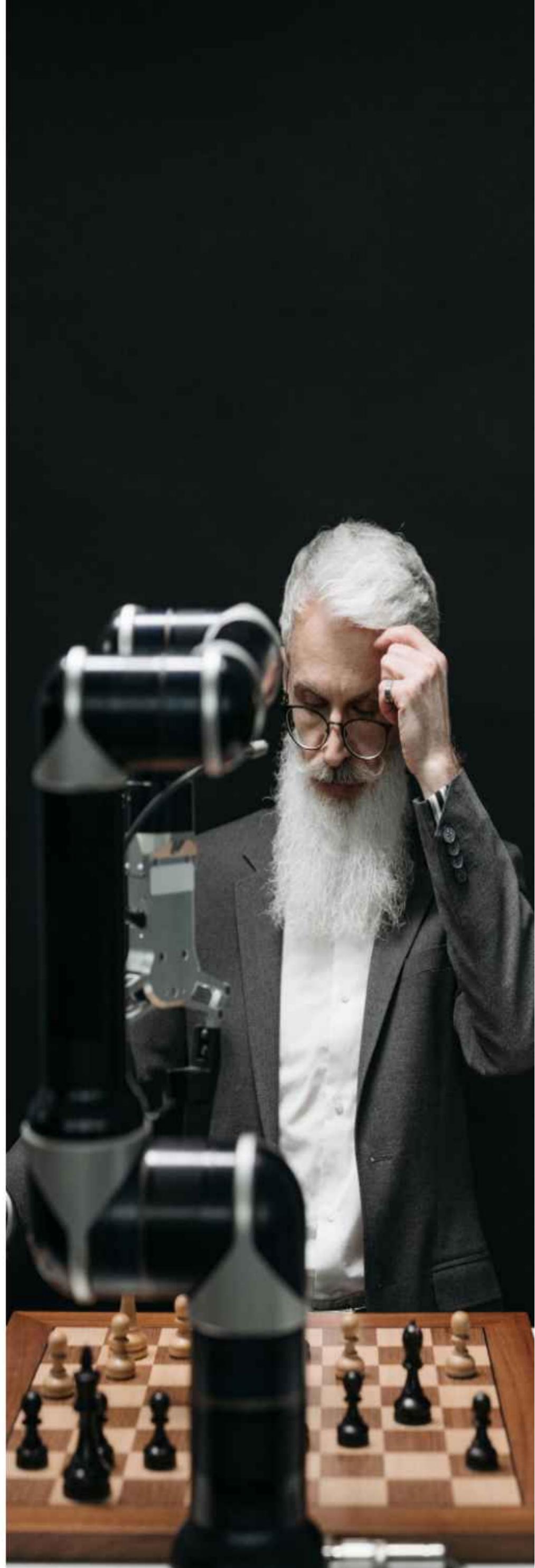
In today's rapidly evolving world, technology and innovation are the driving forces behind progress. From groundbreaking scientific discoveries to revolutionary advancements in everyday gadgets, the landscape of innovation is constantly shifting, reshaping the way we live, work, and interact with the world around us.

At the heart of this relentless march forward is the insatiable human curiosity to push the boundaries of what is possible. With each breakthrough, we inch closer to unlocking the mysteries of the universe and enhancing the quality of life for people worldwide.

One of the most transformative aspects of technology is its ability to connect us like never before. The internet, once a novelty, has become an indispensable tool for communication, collaboration, and access to information. With the rise of social media platforms and digital communication tools, we are more interconnected than ever, transcending geographical boundaries to form global communities.

In the field of healthcare, technology has revolutionized the way we diagnose, treat, and manage diseases. From wearable devices that monitor vital signs in real time to AI-powered diagnostics that analyze medical imaging with unprecedented accuracy, the possibilities for improving patient care are limitless. Furthermore, telemedicine has emerged as a vital resource, providing remote access to medical professionals and specialist care, especially in underserved areas.

As we confront the challenges of climate change and environmental degradation, technology offers hope for a sustainable future. Innovations in renewable energy, such as solar and wind power, are reshaping the energy landscape, reducing our reliance on fossil fuels and mitigating the impact of climate change. Additionally, advancements in green technology, such as electric vehicles and energy-efficient appliances, are paving the way for a more environmentally conscious way of life.



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Artificial intelligence (AI) represents another frontier of innovation, with far-reaching implications for virtually every aspect of society. From self-driving cars and virtual assistants to personalized recommendations and predictive analytics, AI is revolutionizing industries and transforming the way we work and interact with technology. However, with great power comes great responsibility, and the ethical implications of AI, including issues of bias, privacy, and job displacement, must be carefully considered as we navigate this brave new world.

As we stand on the precipice of a new era defined by technological innovation, it is essential to approach the future with a sense of wonder and responsibility. While the possibilities may seem endless, it is our collective duty to ensure that these advancements are wielded for the greater good, fostering a more equitable, sustainable, and inclusive world for generations to come. With all this in mind, technology is not just about gadgets and gizmos; it is about harnessing the power of human ingenuity to shape a better tomorrow. By embracing innovation and pushing the boundaries of what is possible, we can unlock the full potential of technology to create a brighter, more prosperous future for all.

VAISHNAV RAJ  
S4,EEE



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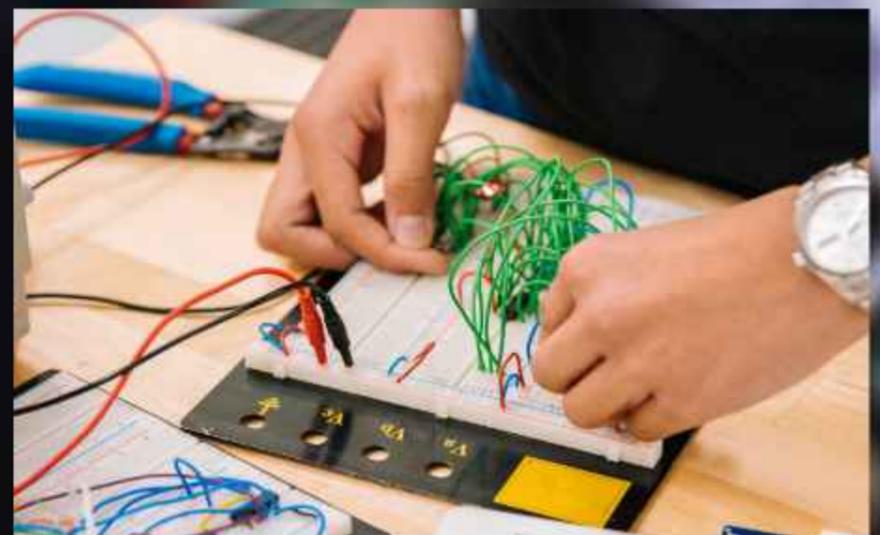
# Electrical Engineering in Daily Life Energizing: Our Contemporary Environment

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**E**lectrical engineering subtly influences practically every aspect of our everyday lives, from the simple flick of a light switch to the flawless functioning of our cell phones. Its effect is felt in our homes, offices, transit networks, and entertainment gadgets, spurring advancement and innovation. Powering Homes and Infrastructure, the electrical systems that keep our cities and homes lit up and running are created, maintained, and improved by electrical engineers. They create effective power distribution networks that guarantee dependable access to electricity everywhere. Another outcome of electrical engineering is smart grid technologies, which allow for improved power management and monitoring, increasing productivity and decreasing waste. Revolutionizing Communication, the digital era thrives on seamless communication, and electrical engineers are at the forefront of this revolution. They design the networks and protocols that enable instant messaging, video calls, and internet browsing. From 5G wireless technology to fiber-optic cables, these innovations enhance connectivity and enable the exchange of information across the globe. In transportation and mobility, electric vehicles (EVs) are becoming increasingly prevalent, thanks to advancements in electrical engineering. Engineers design the batteries, charging infrastructure, and motor systems that power these vehicles, reducing reliance on fossil fuels and mitigating environmental impact. Moreover, electrical engineering plays a crucial role in developing intelligent transportation systems and enhancing safety and efficiency on roads and railways.

Healthcare and Biomedical Engineering, medical devices, imaging technologies, and diagnostic tools owe their functionality to electrical engineering principles. Engineers design pacemakers, MRI machines, and EEG monitors, among others, to diagnose illnesses and improve patient care. The intersection of electrical engineering and biology, known as biomedical engineering, continues to drive innovation in healthcare, offering new solutions to age-old challenges. In entertainment and consumer Electronics, from high-definition televisions to immersive gaming consoles, electrical engineering shapes the entertainment experiences we cherish. Engineers develop cutting-edge audiovisual technologies, optimizing picture quality, sound reproduction, and user interfaces. Additionally, the miniaturization of electronics allows for the creation of sleek and portable devices that fit seamlessly into our daily routines. Sustainable Energy Solutions, with the growing emphasis on sustainability, electrical engineers are pioneering renewable energy solutions. They design solar panels, wind turbines, and energy storage systems to harness nature's resources efficiently. Through grid integration and energy management algorithms, they ensure a smooth transition towards a cleaner, greener future. In essence, electrical engineering is the invisible force driving our modern world. Its applications extend far beyond the confines of laboratories and research institutions, shaping the way we live, work, communicate, and interact with the world around us. As technology continues to evolve, so too will the impact of electrical engineering, propelling us towards new frontiers of innovation and possibility.



AKHIL VIDHYADHARAN  
S8 EEE



# Artificial Intelligence: Applications in Electrical Engineering

In recent years, the integration of electrical engineering and Artificial Intelligence (AI) has revolutionized various industries. From power systems optimization to intelligent control systems, AI is reshaping the landscape of electrical engineering. This article explores the diverse applications of AI in electrical engineering and the transformative impact it has on the field. This combination examines how Artificial Intelligence (AI) is used in a variety of ways in electrical engineering and how this has revolutionized the discipline.

Power generation, transmission, and distribution in smart grids are optimized by the use of AI algorithms in smart grid management. With the aid of predictive analytics, demand variations can be anticipated, facilitating effective resource allocation and lowering energy waste. To identify problems, forecast equipment breakdowns, and stop power outages, machine learning models evaluate sensor data in real time.

Energy management systems driven by AI are used in energy efficiency enhancement to improve energy use in transportation, industry, and buildings.

AI algorithms examine data on energy usage trends gathered by smart sensors and Internet of Things devices to find areas where energy might be saved. In order to reduce energy consumption and preserve comfort and productivity, AI-based algorithms dynamically modify lighting, HVAC systems, and other electrical devices.

Artificial intelligence (AI) techniques like neural networks and fuzzy logic are used in to create automated, robotic, and intelligent control systems for industrial operations. Through constant learning and changing adaptation, adaptive control algorithms maximize system performance in dynamic conditions. Reinforcement learning enhances efficiency and dependability by facilitating autonomous decision-making in intricate control tasks.

AI-driven diagnostic systems are used in fault diagnosis and maintenance to find possible problems in electrical equipment by analysing sensor data and previous maintenance logs. Models for predictive maintenance estimate a component's remaining usable life, allowing for proactive maintenance scheduling and reduced downtime. Artificial intelligence algorithms are linked with condition monitoring techniques, such as thermal imaging and vibration analysis, to detect equipment anomalies early on.

AI technologies make it easier to integrate renewable energy sources, such as wind and solar electricity, into the electrical grid. Forecasting models allow grid managers to balance supply and demand by predicting renewable energy generation based on past patterns and weather data. In order to ensure that intermittent renewable energy sources are seamlessly integrated into the grid, AI-based optimization algorithms are used to maximize the efficiency of energy storage devices.

Unprecedented innovation is being driven across a variety of domains by the intersection of electrical engineering and artificial intelligence. AI technologies provide revolutionary answers to challenging problems, ranging from improving energy efficiency to optimizing power systems. The field of electrical engineering has countless prospects for advancement and innovation as Artificial Intelligence's capabilities grow.



Prof. SARATH S  
HOD EEE



इसरो ISRO

# ISRO successfully launches INSAT-3DS meteorological satellite

In a momentous event that further solidifies India's position in the global space arena, the Indian Space Research Organisation (ISRO) has triumphantly launched the INSAT-3DS meteorological satellite. This achievement underscores India's commitment to advancing space technology for the betterment of society.

The INSAT-3DS satellite represents a significant leap forward in India's capabilities for weather forecasting and monitoring. Equipped with cutting-edge instruments and advanced technology, it promises to revolutionize meteorological observations in the region and beyond.

With its successful launch, INSAT-3DS joins a fleet of satellites dedicated to enhancing our understanding of Earth's atmosphere and climate. The mission objectives include improving the accuracy of weather forecasts, monitoring climate change, and aiding in disaster management efforts.

The launch of INSAT-3DS is a testament to the expertise and dedication of ISRO's scientists and engineers. Their relentless pursuit of excellence has once again showcased India's prowess in space exploration and technology.

The INSAT-3DS satellite is equipped with a suite of sophisticated instruments, including advanced imagers and sounders, which will provide comprehensive data on various atmospheric parameters crucial for weather prediction.

Improved weather forecasting capabilities enabled by INSAT-3DS will have far reaching benefits for society. Accurate predictions can help authorities and communities better prepare for and mitigate the impact of extreme weather events such as cyclones, heavy rainfall, and thunderstorms.

Furthermore, INSAT-3DS will contribute valuable insights to scientific research on climate change and its effects. By gathering continuous data on atmospheric conditions, sea surface temperatures, and other climate variables, the satellite will aid in understanding and mitigating the impacts of global warming.

The successful launch of INSAT-3DS reaffirms India's commitment to leveraging space technology for societal benefits. Weather-related disasters have significant economic and social implications, particularly in vulnerable regions, and INSAT-3DS aims to enhance resilience against such events.



Indian National Satellite - 3D second repeat



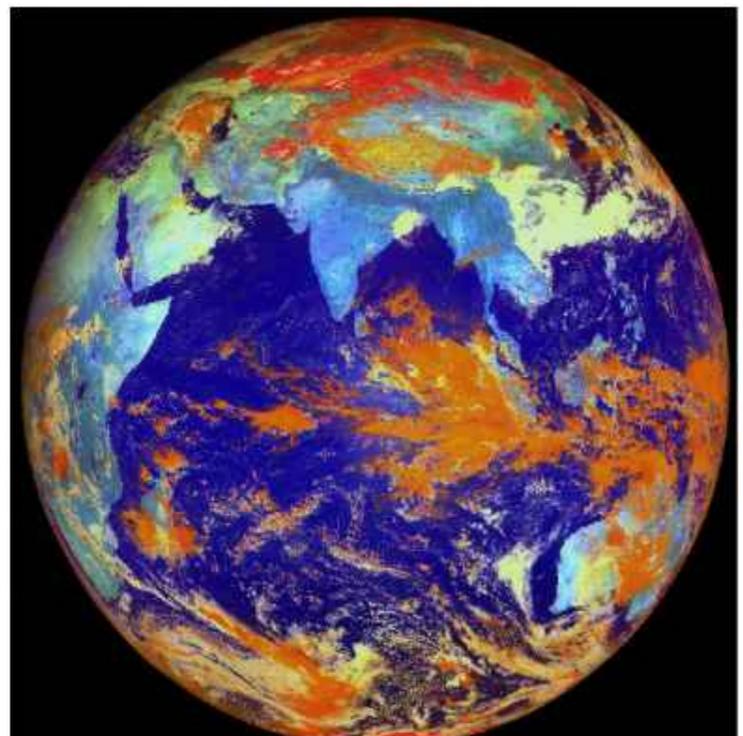
INSAT-3DS is not only a testament to India's technological prowess but also strengthens its position as a reliable provider of space services. ISRO's cost-effective approach to space exploration has earned recognition and admiration from the international community.

As India continues to make strides in space exploration and utilization, the successful launch of INSAT-3DS underscores the nation's determination to harness space technology for the greater good.

The INSAT-3DS mission exemplifies the synergy between scientific research, technological innovation, and societal needs. By addressing challenges related to weather forecasting and climate monitoring, INSAT-3DS contributes to building a more resilient and sustainable future.

With its advanced capabilities and mission objectives aimed at enhancing weather forecasting and climate monitoring, INSAT-3DS promises to be a game-changer in meteorological observations.

Overall, the successful launch of the INSAT-3DS meteorological satellite marks a significant milestone for ISRO and India's space program. Its advanced capabilities and mission objectives hold great promise for improving weather forecasting, monitoring climate change, and aiding disaster management efforts, reaffirming India's position as a leading player in space technology and innovation.



DIVYA DAS  
ECE,S8





# Fast Charging Accelerating : the Future of Electric Vehicles and Portable Devices

**F**ast charging technology has emerged as a game-changer in the realm of electric vehicles (EVs) and portable electronic devices, offering rapid and convenient charging solutions that enhance user experience and drive widespread adoption. This article explores the principles, advancements, and implications of fast-charging technology in shaping the future of transportation and mobile electronics. Fast charging, also known as quick charging or rapid charging, refers to the process of replenishing the battery of an electric vehicle or electronic device at a significantly accelerated rate compared to conventional charging methods. Unlike traditional charging, which typically takes several hours to fully charge a battery, fast charging can deliver a substantial amount of power to the battery in a fraction of time, enabling quicker turnaround times and increased convenience for users. Fast charging relies on a combination of hardware and software innovations to optimize charging efficiency and minimize charging times. Key components of fast charging systems include high-capacity chargers, advanced battery management systems (BMS), and intelligent charging protocols that regulate voltage and current flow to maximize charging speed while ensuring battery safety and longevity. Additionally, advancements in battery chemistry, such as lithium-ion technology and solid-state batteries, have contributed to the development of fast-charging-compatible battery packs with higher energy densities and faster charging capabilities. There are several different fast charging standards and protocols employed in the EV and electronics industries, each offering varying levels of charging speed and compatibility.



Common fast charging standards for electric vehicles include CHAdeMO, Combined Charging System (CCS), and Tesla Supercharger, each capable of delivering high-power DC charging to compatible vehicles. Similarly, portable electronic devices utilize fast charging technologies such as Qualcomm Quick Charge, USB Power Delivery (USB PD), and proprietary fast charging solutions developed by device manufacturers.

Fast charging technology plays a crucial role in accelerating the adoption of electric vehicles by addressing two of the primary concerns of consumers: charging infrastructure and range anxiety. With fast charging stations becoming increasingly prevalent along major highways and urban centers, EV drivers can enjoy the convenience of quick and hassle-free charging, enabling longer trips and greater flexibility in their daily commute. Furthermore, advancements in ultra-fast charging technologies, such as ultra-rapid chargers capable of delivering power levels exceeding 350 kW, promise even shorter charging times and broader EV adoption in the future.

In the realm of portable electronic devices, fast charging technology has transformed the way we interact with smartphones, tablets, laptops, and other gadgets. With rapid charging capabilities, users can quickly top up their device's battery during short breaks or emergencies, eliminating the need to wait for extended periods for a full charge. Additionally, features such as adaptive charging algorithms and temperature monitoring ensure safe and efficient charging, prolonging the lifespan of the device's battery and optimizing overall performance.

Prof. AMJITH S  
A.P.EEE





# India's R&D funding: A Statistical Analysis

The announcement of a 1 lakh crore corpus in the interim Budget for 2024-25 to boost the research and innovation ecosystem has ignited excitement within the scientific and research communities. The decision to update the slogan from 'Jai Jawan Jai Kisan' to 'Jai Jawan, Jai Kisan, Jai Vigyan,' and now 'Jai Jawan, Jai Kisan, Jai Vigyan, Jai Anusandhan,' underscores the commitment to strengthening the foundation of research and innovation for national development. Research and innovation play a pivotal role in driving economic growth, technological progress, and global competitiveness. However, to comprehend the full impact of these initiatives, it is essential to evaluate the current landscape of research and development (R&D) funding in India and its resultant outcomes. This involves assessing India's relatively low R&D expenditure as a percentage of GDP juxtaposed with its significant achievements in terms of patent grants, PhDs conferred, and publication outputs. Analyzing the quality of these outcomes is equally crucial in gauging the true implications of these endeavors. India's R&D sector is experiencing substantial growth, evidenced by a notable surge in Gross Expenditure on Research and Development (GERD) from 6,01,968 million in 2010-11 to 12,73,810 million in 2020-21. However, India lags behind major developed and emerging economies concerning research and development investment as a percentage of GDP, with a mere 0.64%. In comparison, countries like China (2.4%), Germany (3.1%), South Korea (4.8%), and the United States (3.5%) allocate significantly higher proportions of their GDP to R&D investment.

Despite the comparatively lower share of GDP dedicated to R&D, India has emerged as a powerhouse in producing academic talent. Annually, India generates an impressive 40,813 PhDs and is in third place after the United States and China. This achievement reflects India's commitment to fostering intellectual capital and contributing significantly to global research endeavours. Additionally, India's research output remains substantial, ranking third globally, with over 3,00,000 publications in 2022, highlighting the nation's robust research ecosystem and its commitment to advancing knowledge across diverse fields. India also demonstrates commendable performance in patent grants, securing the sixth position globally with 30,490 patents granted in 2022. While this figure is lower compared to the U.S. and China, it underscores India's evolving innovation landscape and its potential for further growth in intellectual property creation. In India, GERD is primarily driven by the government sector, including the central government (43.7%), State governments (6.7%), Higher Education Institutions (HEIs) (8.8%), and the public sector industry (4.4%), with the private sector industry contributing only 36.4% during 2020-21. Collaboration between the government, business enterprises and HEIs is essential to maximise the positive impact of science, technology, and innovation on economic growth and technological advancement.

According to the R&D statistics (2022-23) of the Department of Science and Technology, India's total investment in R&D reached \$17.2 billion in 2020-21, within this sum, 54% (\$9.4 billion) is allocated to the government sector and predominantly utilised by four key scientific agencies - the Defence Research and Development Organisation (30.7%), the Department of Space (18.4%), the Indian Council of Agricultural Research (12.4%), and the Department of Atomic Energy (11.4%).

A significant portion of R&D funding originates from the government, with considerable allocation directed towards autonomous R&D laboratories operated by the government. These laboratories serve a pivotal role in driving research and technology development with strategic implications.

This symbiotic relationship between government funding, R&D execution, and strategic focus underscores the integral role of the government in steering and fostering key scientific advancements. However, the contribution of private industries lags behind that of many other economies. At approximately \$6.2 billion, Indian businesses represent 37% of the country's GERD, in contrast to the global trend,

where business enterprises typically contribute over 65% of R&D. In leading innovative economies such as China, Japan, South Korea, and the U.S., a significant portion (>70%) of R&D funding is from private industries, driven by market forces and profit motives, and the actual R&D activities are conducted in the HEIs. India's R&D ecosystem has its advantages in terms of efficiency, but could benefit more from strong private enterprises' involvement and stronger industry-academia collaboration, facilitating knowledge transfer and fostering innovation. HEIs play a comparatively minor role in the overall R&D investment, contributing 8.8% (\$1.5 billion). It is important to recognise that increasing industry contribution to R&D is a complex issue with no single solution. A multi-pronged approach involving diverse stakeholders is necessary to address the challenges and unlock the potential of R&D for India's economic growth and competitiveness. Learning from the R&D ecosystem in other developed countries while maintaining India's strengths in streamlined decision-making and strategic alignment could be a powerful force to optimise its R&D landscape. India must implement policies that incentivise private companies to invest in R&D.

India's technological and manufacturing aspirations hinge on a transformative shift in its R&D landscape. Closing the existing gap demands a dual strategy: encouraging private sector involvement and fortifying academia's research infrastructure. Initiatives such as the National Deep Tech Startup Policy (NDTSP) signal a strong commitment to technological progress and innovation. This policy holds the potential to incentivise private sector engagement in India's R&D ecosystem. Despite the substantial time and technical uncertainties involved in Deep Tech's creation, allocating resources to safeguard intellectual property and tackle technical obstacles can unlock untapped markets. The recent enactment of the Anusandhan National Research Foundation (ANRF) Act, underscores the government's dedication to catalysing research and innovation as the cornerstone of development.

## Indian Research Funding Agencies



ANANDU V  
S8 EEE



# In the Embrace of First Love

First love is a profound and transformative experience that shapes the very fabric of our lives. It is a chapter in our personal story that often leaves an indelible mark, influencing our emotions, perceptions, and future relationships. In this article, we embark on a journey through the complexities and nuances of first love, exploring its joys, challenges, and enduring significance. First love often begins innocently, with a flutter of excitement and curiosity. It is a time of exploration and discovery, as we navigate the uncharted territory of romantic attraction. From stolen glances to heart-pounding encounters, every moment feels charged with possibility. We find ourselves drawn to another person in ways we never imagined, captivated by their presence, and entranced by their essence. We delve into the exhilarating rush of emotions that accompanies the blossoming of affection, tracing the initial stages of falling in love.

Yet, amidst the euphoria of newfound love, uncertainty lurks beneath the surface. We grapple with questions and doubts, unsure of where this journey will lead us. Will our feelings be reciprocated? Can we trust our heart to another? As we navigate the labyrinth of emotions, we confront the fear of rejection and the vulnerability of opening ourselves up to another person. We explore the challenges of navigating uncertainty, recognizing that love often requires courage and resilience. Despite the obstacles we may face, first love offers moments of profound connection and intimacy. In the embrace of our beloved, we find solace and understanding, forging bonds that transcend the boundaries of time and space. Every shared laugh, every tender caress deepens our connection, weaving a tapestry of shared experiences and cherished memories. We celebrate the ecstasy of connection, acknowledging the transformative power of love to unite souls in profound ways.

Yet even the strongest of relationships are not immune to the trials and tribulations of life. As we navigate the complexities of adulthood, we encounter storms that threaten to test the foundation of our love. From misunderstandings to disagreements, we confront challenges that force us to re-evaluate our priorities and commitments. We explore the resilience of first love, recognizing that true strength lies in our ability to weather the storms together, hand in hand. Inevitably, all journeys must come to an end, and first love is no exception. Whether by choice or circumstance, we may find ourselves bidding farewell to the one who once held our heart. The pain of parting is profound, echoing through the corridors of our soul long after the final goodbye. Yet, amidst the tears and longing, there is beauty in the memories we shared and the lessons we learned. We reflect on the bittersweet nature of farewell, honouring the legacy of first love as we embrace the dawn of a new chapter.

To sum up, first love is a testament to the boundless capacity of the human heart to love and be loved. It is a journey of self-discovery, growth, and transformation that shapes our identity and enriches our understanding of the world. Though the path may be fraught with challenges and uncertainties, the rewards of first love are immeasurable, leaving an indelible imprint on our souls that transcends the passage of time. As we navigate the highs and lows of love, may we cherish the memories, embrace the lessons, and carry the flame of first love in our hearts forevermore.

GOPIKRISHNA PAI  
S4\_ME



# The Intimacy of Holding Hands in a Relationship

In the intricate dance of human connection, few gestures convey as much depth and intimacy as the simple act of holding hands. While often overlooked amidst grand romantic gestures or passionate embraces, the subtle intertwining of fingers can speak volumes about the bond between two individuals in a relationship. At its core, holding hands is a physical manifestation of emotional closeness. It represents a desire for connection, security, and affection. The touch of skin on skin sends signals to the brain, triggering the release of oxytocin, often referred to as the "love hormone," which promotes feelings of trust and attachment.

Moreover, holding hands serves as a silent form of communication. It can express solidarity during challenging times, offering reassurance and support without the need for words. Whether navigating a crowded street or sitting quietly together, the simple act of clasping hands can convey a sense of unity and partnership. In addition to its emotional significance, holding hands also fosters a deeper sense of intimacy within a relationship. It creates a physical closeness that strengthens the emotional bond between partners, fostering feelings of warmth and connection. This physical touch can help couples feel more attuned to each other's needs and desires, enhancing overall relationship satisfaction.

Furthermore, holding hands can be a powerful tool for building and maintaining trust in a relationship. By willingly exposing vulnerability through physical contact, partners demonstrate their commitment and willingness to be vulnerable with each other. This vulnerability fosters a sense of emotional safety and security, laying the foundation for a healthy and enduring partnership. However, the significance of holding hands extends beyond the romantic realm. It serves as a visible symbol of affection and solidarity, not only to partners but also to those around them. In public settings, holding hands communicates to others the strength and stability of the relationship, affirming the bond between two individuals.

To sum up, holding hands is far more than a mere physical gesture; it is a profound expression of love, trust, and intimacy within a relationship. Through this simple yet powerful act, couples forge deeper connections, strengthen bonds, and navigate the journey of life hand in hand, united in love and solidarity.

KEERTHANA S  
S6 CSE



# SPEED

# UNLEASHED



## DESIGN

The Absolut Jesko commands attention with its sleek and aerodynamic design. Every curve and contour serves a purpose, maximizing airflow and minimizing drag to enhance performance. The carbon fiber bodywork not only reduces weight but also adds to the car's visual appeal, giving it a menacing yet elegant presence on the road.

One of the most striking features of the Absolut Jesko is its innovative dihedral synchro-helix doors, which not only add to the car's aesthetic allure but also make entering and exiting the vehicle a breeze. Combined with the low-slung profile and aggressive stance, these doors give the Absolut Jesko an unmistakable presence that sets it apart from the competition.

## PERFORMANCE

The Absolut Jesko is in a league of its own. Powering this beast is a twin-turbocharged V8 engine that produces an astonishing 1600 horsepower, making it one of the most powerful production cars ever built. With a top speed exceeding 300 mph, the Absolut Jesko is not just fast—it's blisteringly fast. The Absolut Jesko boasts advanced aerodynamics and active suspension systems that keep it glued to the road, providing unparalleled handling and stability even at ludicrous speeds. Whether carving through winding mountain roads or tearing up the track, the Absolut Jesko delivers an exhilarating driving experience that few cars can match.

## TECHNOLOGY

The Absolut Jesko is a marvel of technology and innovation. From the state-of-the-art infotainment system to the customizable digital displays, every aspect of the interior is designed with the driver in mind. Carbon fiber accents and premium materials adorn the cabin, creating a luxurious yet purposeful environment that reflects the car's performance-oriented ethos.

## EXCLUSIVITY

As with all Koenigsegg models, exclusivity is a key selling point of the Absolut Jesko. With production limited to a select number of units, owning an Absolut Jesko is a rare privilege reserved for the fortunate few. Each car is meticulously handcrafted by skilled artisans at Koenigsegg's state-of-the-art facility in Ångelholm, Sweden, ensuring the highest level of craftsmanship and attention to detail.

# ENGINEERING MARVEL



## PERFORMANCE

At the heart of the Bugatti Chiron lies an awe-inspiring 8.0-litre quad-turbocharged W16 engine that generates a staggering 1,500 horsepower. This powerhouse of an engine propels the Chiron from 0 to 60 mph in a mere 2.5 seconds, with a top speed electronically limited to 261 mph. Such blistering acceleration and mind-boggling top speeds make the Chiron one of the fastest production cars ever created, cementing its status as a true performance titan.

## AERODYNAMICS

To harness the immense power of its engine and achieve unprecedented levels of performance, the Bugatti Chiron boasts cutting-edge aerodynamics. Every curve, contour, and vent are meticulously crafted to optimize airflow and reduce drag, allowing the Chiron to slice through the air with minimal resistance. The active aerodynamic elements further enhance stability and cornering prowess, ensuring that the Chiron remains firmly planted on the road, even at high speeds.

## INTERIOR

Step inside the Bugatti Chiron, and you're greeted by a lavish interior that exudes opulence and refinement. Handcrafted from the finest materials, the cabin is a testament to the artistry and craftsmanship synonymous with the Bugatti name. Premium leather upholstery, exquisite wood trim, and brushed aluminium accents adorn every surface, creating an environment that pampers occupants in unparalleled comfort and luxury.

## TECHNOLOGY

Complementing its performance prowess is a host of state-of-the-art technology features that elevate the driving experience to new heights. The Bugatti Chiron is equipped with an advanced infotainment system that seamlessly integrates with smartphones and other devices, keeping occupants connected and entertained on the go. A suite of driver-assistance systems ensures a safe and confident driving experience, with features such as adaptive cruise control, lane-keeping assist, and automatic emergency braking.

## EXCLUSIVITY

As with all Bugatti models, exclusivity is a defining characteristic of the Chiron. With production limited to a select number of units, owning a Chiron is a rare privilege reserved for the elite few. Furthermore, Bugatti offers an extensive range of customization options, allowing discerning customers to personalize every aspect of their Chiron to their exact specifications. From bespoke paint colours to unique interior trims, the possibilities for customization are virtually limitless, ensuring that each Chiron is one-of-a-kind.

VASISHT SUNIL  
S4 AI/ML





# SLEEK DOMINANCE

In the realm of high-performance luxury sedans, few names carry the same weight and prestige as the BMW M5. Born from the legacy of BMW's Motorsport division, the M5 has consistently pushed the boundaries of what a sedan can achieve, blending exhilarating performance with unmatched refinement and comfort. Since its inception in the mid-1980s, the M5 has remained a benchmark for automotive excellence, continually evolving to meet the demands of enthusiasts and connoisseurs alike. The M5 lineage traces its roots back to the iconic E28 model, introduced in 1984. Powered by a potent inline-six engine, the E28 M5 stunned the automotive world with its combination of speed, agility, and practicality. Over the years, subsequent generations of the M5 have raised the bar even higher, embracing cutting-edge technology and engineering prowess to deliver unparalleled driving experiences.

At the heart of every M5 lies a formidable powerplant, meticulously crafted to deliver exhilarating performance on demand. The latest iteration of the M5 is no exception, boasting a twin-turbocharged V8 engine that churns out prodigious amounts of horsepower and torque. With blistering acceleration and a top speed that rivals some sports cars, the M5 effortlessly blurs the line between luxury sedan and high-performance machine. True to its motorsport heritage, the M5 offers a driving experience that is nothing short of exhilarating. Equipped with advanced chassis technologies such as adaptive suspension and torque vectoring, the M5 delivers razor-sharp handling and agility, allowing drivers to carve through corners with confidence and precision. Whether cruising along the highway or tackling twisty mountain roads, the M5 remains composed and poised, offering a level of dynamic capability that few sedans can match.

Beyond its performance credentials, the M5 also excels in the realm of luxury and refinement. From its meticulously crafted interior to its state-of-the-art infotainment system, every aspect of the M5 is designed to cocoon occupants in comfort and sophistication. Premium materials abound, from the supple leather upholstery to the rich wood and metal accents, creating an ambiance of understated elegance and luxury. **As a flagship model in BMW's lineup, the M5 is at the forefront of automotive innovation, incorporating a host of advanced technologies to enhance both performance and convenience. Features such as adaptive cruise control, lane-keeping assist, and automated parking make every journey safer and more enjoyable, while cutting-edge connectivity features keep drivers connected and entertained on the go. In the world of high-performance luxury sedans, the BMW M5 stands tall as a true icon of automotive excellence. With its blend of breathtaking performance, refined luxury, and cutting-edge technology, the M5 continues to captivate enthusiasts and critics alike, setting the standard for what a sedan can achieve. As BMW's ultimate expression of driving pleasure, the M5 remains a beacon of automotive innovation and engineering prowess, a testament to the enduring allure of the ultimate driving machine.**





PORSCHE



# PORSCHE PRECISION

The genesis of the GT3 RS can be traced back to Porsche's motorsport heritage. As a brand deeply rooted in racing, Porsche has a long history of success on the track, with countless victories in endurance racing, GT championships, and iconic events like the 24 Hours of Le Mans. It is from this crucible of competition that the GT3 RS was born. The first iteration of the GT3 RS debuted in 2003, based on the 996-generation 911. It was designed as a more track-focused variant of the standard GT3, with enhanced aerodynamics, reduced weight, and a more potent engine. With its race-derived technology and uncompromising performance, the GT3 RS quickly established itself as the ultimate track weapon for enthusiasts and professional drivers alike.

Subsequent generations of the GT3 RS continued to raise the bar, with each iteration pushing the boundaries of performance and handling. The 997-generation GT3 RS introduced innovations such as the lightweight carbon-fibre hood and wider rear track, while the 991-generation GT3 RS showcased advancements like rear-wheel steering and a magnesium roof. At the heart of the GT3 RS beats a naturally aspirated flat-six engine, a hallmark of Porsche's engineering excellence. The latest iteration of the GT3 RS, based on the 992-generation 911, is powered by a 4.0-liter six-cylinder engine that produces over 500 horsepower and revs to a spine-tingling 9,000 rpm. This high-revving powerplant is paired with a lightning-fast PDK dual-clutch transmission, enabling blistering acceleration and razor-sharp gear changes. But power is only part of the equation. The GT3 RS is also a masterclass in aerodynamics and chassis dynamics. From its aggressive front splitter to its towering rear wing, every element of the GT3 RS's exterior is designed to maximize downforce and stability at high speeds. Combined with a race-inspired suspension setup and advanced electronic aids, the GT3 RS delivers unparalleled agility and precision on both the road and the track.

What truly sets the GT3 RS apart is the visceral driving experience it offers. From the moment you settle into the carbon-fibre bucket seats and grasp the Alcantara-wrapped steering wheel, you know you're in for something special. The engine roars to life with a primal growl, and as you unleash the full might of the flat-six, you're thrust back into your seat with relentless acceleration. But it's not just straight-line speed that defines the GT3 RS – it's the way it dances through corners with balletic grace and precision. The steering is telepathic, offering instant feedback and pinpoint accuracy, while the brakes provide unyielding stopping power time and time again. Whether you're attacking a series of hairpin turns on a mountain pass or carving through chicanes on a racetrack, the GT3 RS remains composed and confidence-inspiring, urging you to push harder and explore the limits of your own abilities. While performance figures and lap times are certainly impressive, they only tell part of the story. What truly sets the GT3 RS apart is the emotional connection it fosters between man and machine. It's the way the engine sings as it climbs towards redline, the sensation of G-forces pressing you into the seat as you corner at triple-digit speeds, the adrenaline rush that comes with each gear change and each apex conquered.



GOPIKRISHNA PAI  
S4 ME



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# Mercury Arc Rectifier

## A Machine Straight Out of Sci Fi

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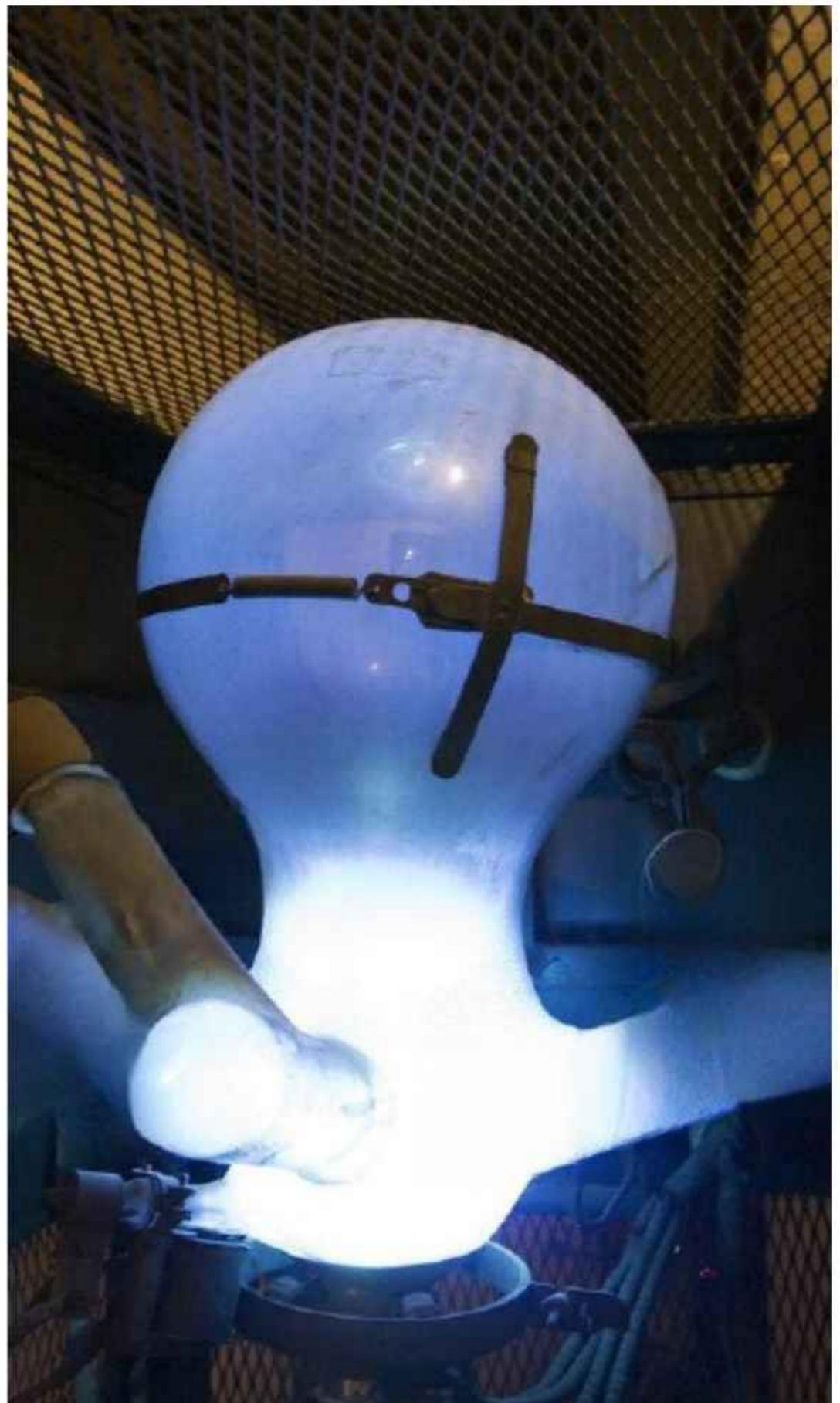
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We're all familiar with the iconic arc reactor, the energy source that powers Tony Stark's Iron Man suit in the Marvel universe. It's a glowing orb radiating blue energy – pure science fiction! But here in the real world, technology often appears less glamorous. However, there once existed a machine with a sci-fi aesthetic that played a vital role in 20th-century telecommunication and railways: the mercury arc rectifier.

While not a miniature power source for a superhero suit, the mercury arc rectifier was a bulky machine used to convert high-voltage or high-current alternating current (AC) into direct current (DC). It is a type of cold cathode gas-filled tube, with a unique feature – a cathode made from a pool of liquid mercury, allowing for self-restoration. This design made mercury-arc valves exceptionally robust and durable, capable of handling much higher currents than most other gas discharge tubes. Some even remained in continuous service for decades, rectifying 50-ampere currents.

The history of the mercury arc rectifier began in 1882 when Jules Jamin and G. Maneuvrier observed its rectifying properties. Peter Cooper Hewitt invented the device in 1902, and further development continued throughout the 1920s and 1930s by researchers across Europe and North America. Before its invention, converting AC utility power to DC required expensive, inefficient, and high-maintenance rotary converters or motor-generator sets.

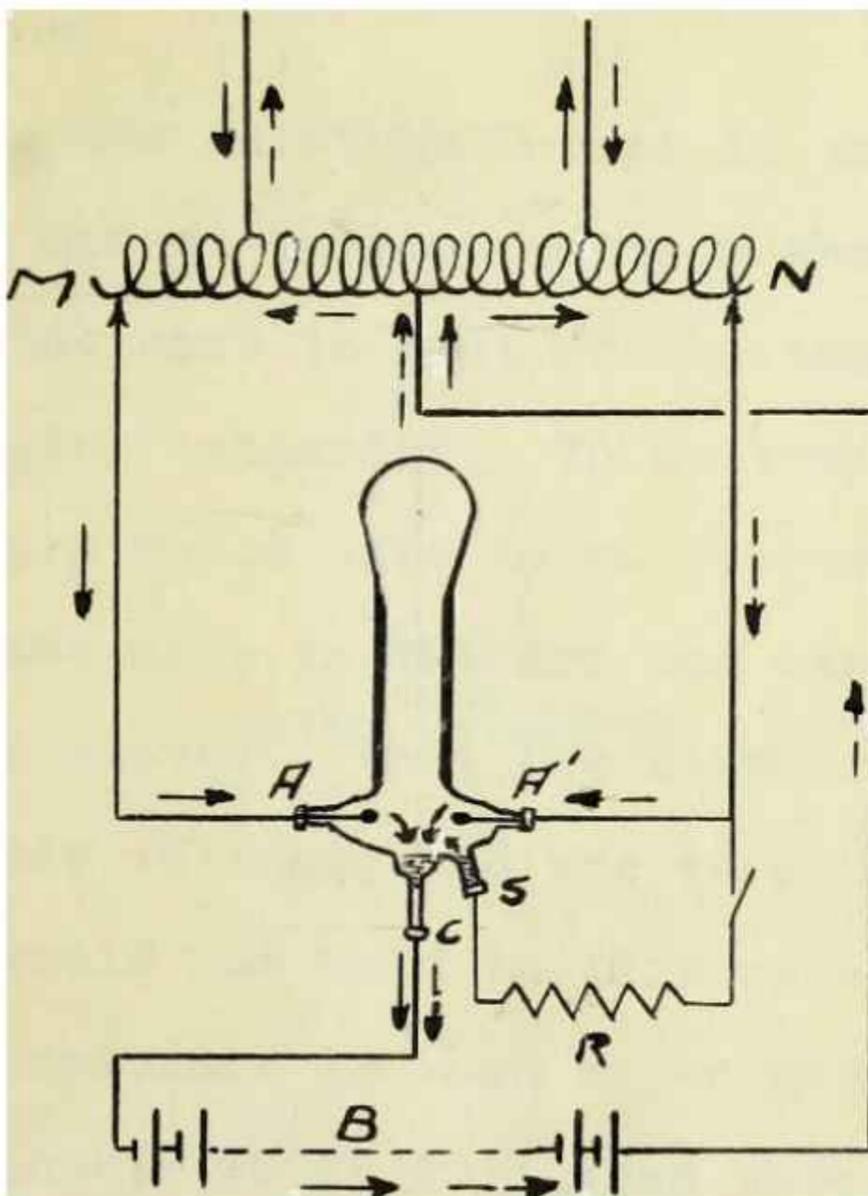
Mercury arc rectifiers, also known as converters, found applications in charging storage batteries, arc lighting systems, the DC traction motors for trolleybuses, trams, and subways, and electroplating equipment. Their reign continued well into the 1970s when semiconductor rectifiers finally replaced them. These mercury-based devices were once used to power industrial motors, electric railways, streetcars, and electric locomotives, as well as radio transmitters and high-voltage direct current (HVDC) power transmission systems. They were the primary method for high-power rectification until the introduction of semiconductor rectifiers like diodes, thyristors, and gate turn-off thyristors (GTOs) in the 1970s. These solid-state rectifiers offered significant advantages, including higher reliability, lower cost and maintenance, and most importantly, a reduced environmental risk.



At its heart, a mercury arc rectifier has a sealed glass tube containing a pool of liquid mercury acting as the cathode (electron emitter). Surrounding this pool are multiple anodes, typically made of graphite or steel. A separate starting electrode plays a crucial role in initiating the process. The intense heat from the starting arc vaporizes the mercury, filling the tube with a cloud of mercury vapor. Mercury readily emits electrons when heated, making it an effective cathode, while the anodes are poor electron emitters. During the AC cycle, when an anode becomes positively charged relative to the cathode, a current of electrons flows from the mercury vapor (acting as a continuous source) to the anode. However, when the polarity reverses, the anode repels electrons, stopping the current flow in that direction. This one-way flow of current only during the positive half cycle of the AC waveform is what converts it into a pulsating DC output.

The sci-fi aesthetic of the machine comes from the blue light caused by the excitation of the mercury vapor inside the glass chamber. The shape of the mercury arc rectifier, resembling something out of an alchemist's lab or a mad scientist's invention, combined with its blue glow, makes it a machine that could easily find a place in a science fiction novel. The mercury arc rectifier, once a symbol of industrial progress, stands as a testament to human ingenuity in harnessing electrical power. Its ability to convert AC to high-power DC fuelled advancements in various sectors, from electric railways to large-scale industrial processes. However, the tide has turned. The discovery of the detrimental effects of mercury on human health and the environment, coupled with the development of safer and more efficient solid-state rectifiers, has rendered the mercury arc rectifier obsolete.

While these fascinating devices are no longer part of our active electrical infrastructure, their legacy lives on. They serve as a reminder of the constant drive to improve technology, not just in terms of functionality but also in terms of environmental impact. The knowledge gleaned from the mercury arc rectifier continues to inform the development of next-generation power conversion technologies, paving the way for a cleaner and more sustainable future.



ALEN JOHN  
S8 EEE



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# Human-Machine Interface Design For Embedded Systems

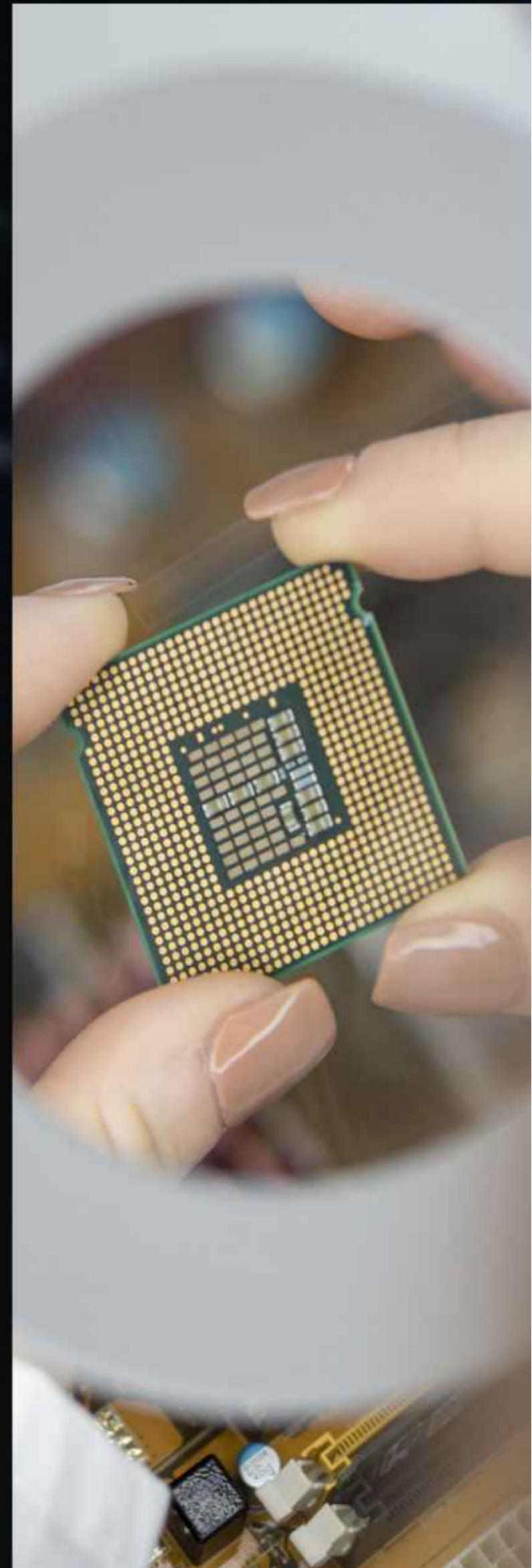
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Embedded systems perform specific tasks with larger machines and devices. There are many types of embedded systems, and they can be found everywhere from industrial machines to medical equipment to aerospace components. Industrial embedded systems often have an embedded operating system and embedded software to perform specific monitoring and control functions. Similarly, modern medical equipment contains a wide variety of embedded systems for sensors and control mechanisms. A basic embedded system is a computing system with its own hardware and software that can interact with various input and output devices. Their hardware and software complexities can vary significantly from application to application, ranging from having no user interface (UI) – for example, on devices designed to perform a single task within a mobile embedded system – to complex graphical user interfaces, such as the smart surfaces found in modern aircraft interior controls.

Healthcare devices and equipment, such as diagnostic equipment and imaging systems, rely on embedded control systems. Examples of HMIs and embedded systems working in conjunction include digital flow sensors, magnetic resonance imaging machines, patient monitoring systems, and more medical technology. Furthermore, the growth of the Internet of Things (IoT) presents new opportunities for embedded operating systems in healthcare. For example, future wearables with real-time operating system capabilities may track health data, such as vital signs, and transmit it to healthcare service providers for instantaneous monitoring and diagnosis.

A human-machine interface (HMI) is a general term for engineering solutions that enable interaction between people and machines, computer systems, or applications. Starting and stopping processes, as well as monitoring, can be done remotely, thus reducing the number of errors and the time required for making decisions. In all their variety of forms, the primary goal of all HMIs is to enable efficient communication between humans and machines in a clear and accessible way. The cornerstone of HMI design is portability and ease of use. The process of creating an HMI includes the development of hardware and software, as well as the creation of the necessary infrastructure. The more complex the tasks an HMI faces, the more complex its structure becomes. Sophisticated user interfaces are becoming an integral part of production equipment.



A Human Machine Interface (HMI), equipped with a Touch Screen and Colour Graphic display, is becoming the industry standard and can be found from home automation to complex industrial equipment. HMI enables companies to enhance their products' look and feel, improve visibility, and increase functionality. It also helps companies to differentiate their products for wider market appeal. HMI devices contain embedded electronics that are designed to control all of the complex features of the system, including touch screen and colour graphic displays, and these features have significantly increased the demand for HMI data handling and processing. NTX's embedded single-board solutions are designed specifically to support these new generation HMI applications. In this semi-custom design, standard solution can be leveraged to springboard the design, reducing time to market, minimizing design risk and lowering development cost.

In embedded systems, many Human-Machine Interface (HMI) methods improve user engagement. Touch controls on capacitive and resistive touchscreens are simple to use. This have also been used on a wide range in the automotive embedded industry with various technologies being in work with this and also caring the main purpose related to it. The hands-free operation made possible by speech recognition improves accessibility. Intuitive control is made possible via gesture recognition, which uses sensors to analyse movements.

OLED and TFT-LCD display technologies produce vivid images. Interfaces for augmented reality (AR) superimpose digital data on the real world. To maximise the user experience in a variety of embedded systems, from smartphones to industrial control panels, each HMI technology caters to needs. The application's needs for usability, feedback, and environmental factors will determine which HMI technology is best. Human-machine interface (HMI) technologies are essential for improving the driving experience in electric vehicles (EVs). Touchscreens, which are typically capacitive, offer simple controls for the infotainment and settings of a vehicle. To ensure that drivers can engage without being distracted, physical interfaces like buttons and knobs provide tactile feedback for important functions. Systems that recognize voice allow for hands-free operation, which enhances safety. Head-up displays (HUDs) lessen the need for drivers to look away by projecting pertinent information onto the windscreen. Navigation or danger warnings might be superimposed on the real-world view using augmented reality (AR) interfaces. Usability, safety, and seamless integration are prioritized by the various HMI technologies used in EVs, which advances the field of electric vehicle technology as a whole.

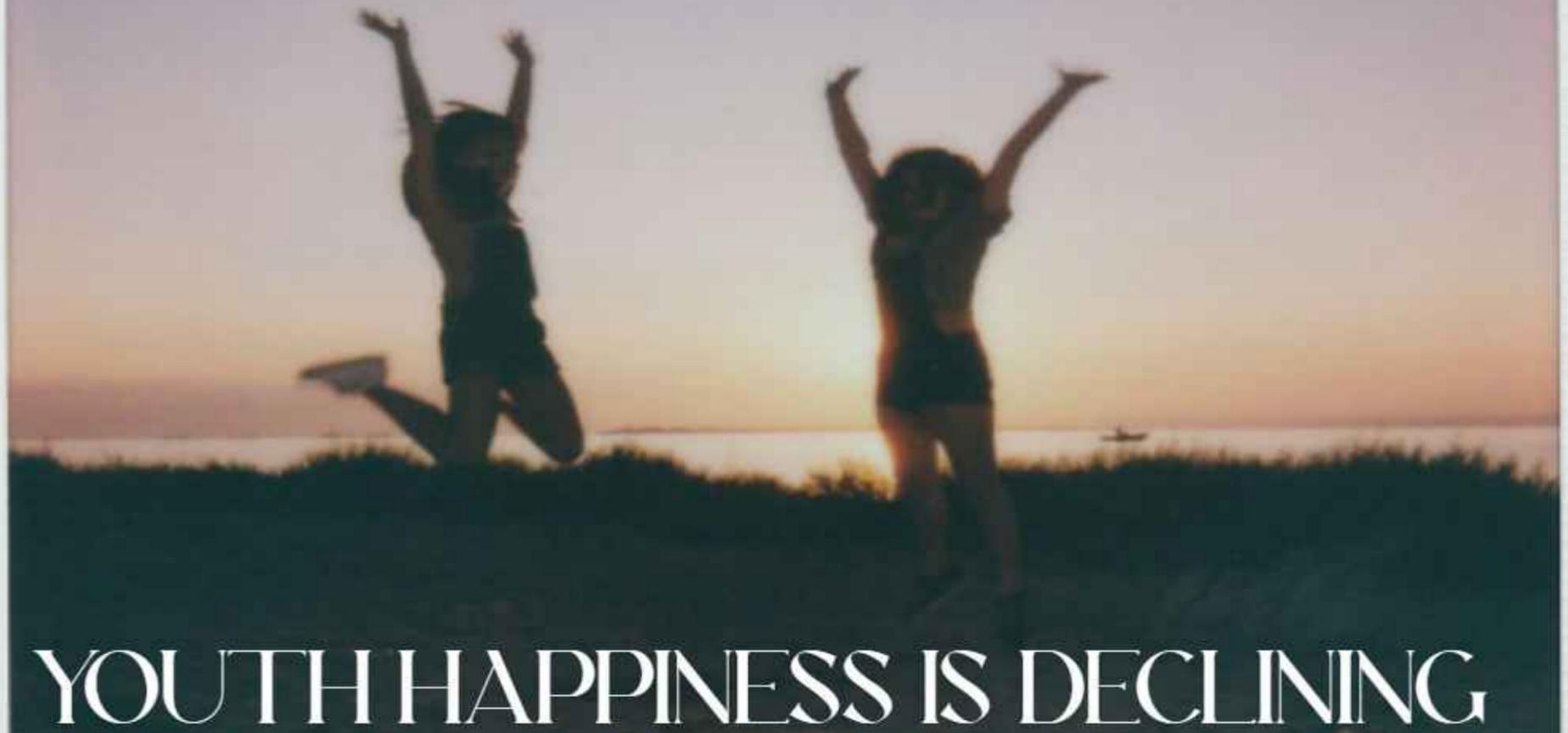
Human-Machine Interface (HMI) technologies are used in both Model-Based Design (MBD) and the Internet of Things (IoT). Touchscreens, which are common in smart gadgets, provide simple interaction. Especially in Internet of Things applications, voice interfaces improve accessibility. The use of Augmented Reality (AR), which superimposes digital data on the real world, facilitates maintenance in both IoT and MBD systems. For model design, MBD makes use of graphical programming interfaces. Gesture recognition may be used by embedded devices in IoT to control operations. In these fields, the choice of HMI technologies is influenced by user experience, application requirements, and the necessity for seamless integration, which reflects the changing environment of linked devices and model-driven design.



NIMISHA S  
S8 ECE



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20 .box h2{
21
22   margin: 0 0 30px;
23   padding: 0;
24   color: #fff;
25   text-align: center;
26 }
27 .box h3{
28   margin: 0 0 10px;
29   padding: 0;
30   color: #fff;
31   text-align: center;
32 }
33 .box .inputBox{
34   position: relative;
35 }
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# YOUTH HAPPINESS IS DECLINING

Young people are becoming less happy than older generations as they suffer “the equivalent of a midlife crisis”, America’s top doctor warned that “young people are really struggling”. The World Happiness Report, an annual barometer of wellbeing in 140 nations coordinated by Oxford University’s Wellbeing Research Centre, Gallup and the UN Sustainable Development Solutions Network, showed “disconcerting drops [in youth happiness] especially in North America and western Europe,” said Prof Jan-Emmanuel De Neve, director of the Wellbeing Research Centre and editor of the study.

Since before COVID, the top ten nations have largely not changed. Denmark is presently quite close to Finland, which remains at the top. Ten Nordic nations are ranked first. However, throughout the following ten years, there will be even more change, with the happiness of the Eastern European transition countries—particularly Czechia, Lithuania, and Slovenia—rising. The United States and Germany have dropped to 23 and 24 in the rankings. Youth happiness index plays a large part in this.

The young tend to be happier than the elderly in many places, but not everywhere. However, youth satisfaction has dropped so precipitously in North America. The young, on the other hand, are far happier than the elderly in the Central and Eastern European transition countries. Happiness tends to decrease during the course of a person’s life in Western Europe as a whole, with sporadic upturns for the elderly. Happiness varies with age in other parts of the world.

As a result, the happiness rankings of various nations varies significantly depending on age. When age and circumstances are taken into account, people born before 1965 have life evaluations that are roughly 0.5 points higher than people born after 1980.

Across all age categories, Central and Eastern European nations have seen the biggest increases in happiness. The increases in happiness indexes of the old Soviet Union was halved. There were significant rises in East Asia as well, particularly among the elderly. In contrast, South Asia saw a decline in happiness across all age categories. It also occurred in North America, particularly in the youth. And it declined across all age categories in the Middle East and North Africa. The youth in Central and Eastern Europe are currently as content as those in Western Europe, and the divide between the ages of the two regions is now just half as great as it was between 2006 and 2010. With the exception of Europe, every area has seen a significant increase in happiness inequality between 2006 and 2010. And it has particularly increased.

For the elderly Sub-Saharan Africa has seen the largest increase. Everywhere except East Asia and Europe has seen an increase in the frequency of negative feelings between 2006 and 2010. Actually, in Central and in Eastern Europe, from 2006 to 2010, there has been a decrease in the frequency of unpleasant feelings across all age groups. From 2021 to 2023, women were more likely than men to experience unpleasant emotions in every region.

The gender gap widens as people age almost everywhere. From 2006 to 2010, the frequency of happy feelings shifted in all regions in the same direction as life assessments. However, the age distributions diverge. With the exception of North America, where pleasant feelings are least common for people in the middle age groups, every location has a frequency of positive emotions that is highest for people under 30 and gradually declines with age.

The percentage of people who have assisted those in need has increased globally as a result of the COVID crisis. This surge in kindness has been significant for all generations, but particularly for those born after 1980, who are significantly more inclined to assist those in need than previous generations. Feelings of social support are more than twice as common as loneliness in practically every part of the world, according to comparable measures.

Happiness is influenced by both loneliness and social support, with social support typically having a greater impact. In addition to their impacts on social support and loneliness reduction, all forms of social contacts also contribute to happiness. Life satisfaction declines steadily from childhood through adolescence and into adulthood in majority of the countries. Around the world, youth compared to older adults, those aged 15 to 24 still report higher levels of life satisfaction. However, because young people are becoming less satisfied with their lives, this gap has recently reversed in North America and is closing in Western Europe. On the other hand, young people in Sub-Saharan Africa report higher levels of life satisfaction. Between 2006 and 2019, there was an overall improvement in life happiness among young people aged 15 to 24 worldwide, and since then, life satisfaction has remained consistent. However, the situation differed by area. North America, Western Europe, the Middle East and North Africa, and South Asia saw declines in youth well-being. It rose in the rest of the world. When it comes to younger ages (10–15), there is not much data.

The level of life satisfaction has decreased in high income countries. By the time they are twelve, girls report a lower level of life satisfaction than boys. Between the ages of 13 and 15, this disparity deepens, and the epidemic has intensified the distinction. Due to the rarity of data collection on this young ages elsewhere, these points are limited to high-income nations. Global data from 2006 to 2013 indicates that there were no gender disparities for those aged 15 to 24. However, starting in 2014, women reported feeling more satisfied with their lives than men did, however this difference has closed since the pandemic. Regional disparities are hidden by the global gender gap, which is especially noticeable in low-income nations. In high-income nations, gender differences do not exist.

Reasons why the youth happiness index is less than that of elderly.

**1. Life Satisfaction vs. Momentary Happiness:** Older individuals may have a higher sense of life satisfaction due to having lived through various experiences and attained wisdom over time. On the other hand, youth may experience momentary happiness or fleeting pleasures without necessarily having a broader sense of fulfillment.

**2. Responsibilities and Stress:** Younger people often face significant stressors related to education, career, relationships, and establishing their identity. These pressures can detract from their overall happiness. Conversely, many elderly individuals may have already navigated these challenges and have fewer responsibilities, leading to a greater sense of contentment.

**3. Social Connections and Support:** Older adults may have stronger social networks, established friendships, and family bonds, which can contribute to their happiness. Younger individuals, especially in modern societies where social connections may be more transient, may face challenges in forming and maintaining meaningful relationships, impacting their happiness.

**4. Sense of Purpose and Accomplishment:** Older adults may feel a sense of accomplishment from their life experiences, careers, and contributions to society. In contrast, youth may still be in the process of discovering their passions and purpose, which can lead to feelings of uncertainty and lower happiness levels.

**5. Perception and Expectations:** There could be a perception bias at play, where societal norms and media portrayals lead to the expectation that youth should be carefree and happy, while the struggles of older individuals may be overlooked. Consequently, any unhappiness experienced by the youth may be more conspicuous.

It's important to note that happiness is a complex and subjective phenomenon influenced by various individual, societal, and cultural factors. While youth may experience lower levels of happiness on average, this doesn't diminish the validity of their experiences or the challenges they face. Additionally, there are many happy young people and unhappy older individuals, and individual differences must be considered when discussing happiness across different age groups.

PRANAV GOKUL  
S8 EEE



# Exploring the Serene Charms of Kayamkulam : A Hidden Gem in Kerala's Backwaters



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Prof. AMJITH S  
A.P.E.E

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Nestled amidst the tranquil backwaters of Kerala lies the enchanting town of Kayamkulam, a serene haven waiting to be discovered by travelers seeking an authentic glimpse into the beauty of South India. Steeped in rich cultural heritage and natural splendor, Kayamkulam offers a unique blend of traditional charm and modern allure, making it a captivating destination for explorers of all kinds.

#### Embracing Nature's Bounty:

At the heart of Kayamkulam's allure is its breathtaking natural landscape, characterized by the meandering backwaters of Lake Vembanad and the lush greenery that envelops the town. Visitors can embark on leisurely boat rides along the tranquil waterways, immersing themselves in the idyllic surroundings while catching glimpses of local life along the banks. The renowned Kayamkulam boat race, held annually during the Onam festival, is a spectacle not to be missed, offering an exhilarating display of traditional longboat racing that is deeply ingrained in the region's culture.

#### Cultural Treasures and Temples:

Kayamkulam boasts a rich tapestry of cultural heritage, with a myriad of temples and religious sites dotting its landscape. The Kayamkulam Kochunniyar temple stands as a testament to the town's spiritual significance, drawing devotees and pilgrims from far and wide with its ornate architecture and vibrant festivals. Visitors can partake in the lively temple festivities, experiencing the vibrant colors, rhythmic music, and fervent devotion that define Kerala's cultural identity.

#### Exploring History and Heritage:

For history enthusiasts, Kayamkulam offers a glimpse into its storied past through landmarks such as the Kayamkulam Palace, once the residence of the rulers of Kayamkulam, and now a cherished heritage site showcasing the architectural splendor of a bygone era. The Krishnapuram Palace, located nearby, is another architectural marvel, renowned for its intricate wood carvings and the famed Gajendra Moksha mural.

#### Culinary Delights and Local Flavors:

No visit to Kayamkulam would be complete without indulging in its delectable culinary offerings. From sumptuous seafood delicacies fresh from the backwaters to traditional Kerala fare bursting with flavors, the town's eateries and street vendors promise a gastronomic adventure like no other. Be sure to sample local favorites such as karimeen pollichathu (pearl spot fish marinated in spices and grilled in banana leaves) and kappa (tapioca) with meen curry (fish curry), for a true taste of Kerala's culinary heritage.

#### Hospitality and Homestays:

One of the highlights of visiting Kayamkulam is the warm hospitality extended by its residents, who welcome travelers with open arms and genuine warmth. Homestays offer a unique opportunity to immerse oneself in the local way of life, providing a cozy and comfortable setting to unwind after a day of exploration. Here, guests can savor homemade delicacies, engage in meaningful conversations with their hosts, and forge lasting connections that transcend cultural boundaries.

#### Preserving the Essence of Kayamkulam:

As Kayamkulam continues to attract visitors from far and wide, efforts are underway to preserve its natural beauty and cultural heritage for generations to come. Sustainable tourism initiatives seek to strike a balance between economic development and environmental conservation, ensuring that the town's pristine ecosystem remains unspoiled for future generations to enjoy.

Kayamkulam, nestled amidst the serene backwaters of Kerala, offers a plethora of tourist attractions that captivate visitors with its natural beauty, rich cultural heritage, and historical significance. Here are some of the must-visit places in and around Kayamkulam:

Kayamkulam Backwaters: Explore the tranquil backwaters of Kayamkulam by taking a leisurely houseboat or canoe ride. Immerse yourself in the scenic beauty of the lush green surroundings, dotted with coconut palms and traditional villages, as you glide through the peaceful waterways.



**Kayamkulam Beach:** Relax and unwind at the pristine Kayamkulam Beach, known for its golden sands and tranquil atmosphere. Take a leisurely stroll along the shoreline, indulge in beach activities, or simply bask in the sun while enjoying breathtaking views of the Arabian Sea.



**Kayamkulam Lake:** Embark on a boat cruise or ferry ride on Kayamkulam Lake, the picturesque backwater stretch flanked by coconut groves and paddy fields. Marvel at the beauty of the sunset over the tranquil waters as you soak in the serenity of the surroundings.



**Kayamkulam Kochunniyar Temple:** Pay a visit to the Kayamkulam Kochunniyar Temple, dedicated to the revered deity Kochunniyar. Admire the temple's traditional Kerala architecture, intricate wood carvings, and vibrant murals depicting mythological tales. Don't miss the annual temple festival, known for its colorful processions and cultural performances.



**Oachira Temple:** Visit the ancient Oachira Temple, known for its unique ritualistic practices and architectural simplicity. The temple complex is devoid of traditional structures and is dedicated to the universal consciousness, with no specific deity worshipped here.



**Karunagappally:** Explore the nearby town of Karunagappally, famous for its religious diversity and cultural heritage. Visit the historic Padanayarkulangara Mahadeva Temple, St. Thomas Church, and the picturesque Munroe Island, known for its scenic beauty and backwater cruises.



**Thrikkunnappuzha:** Experience the serene beauty of Thrikkunnappuzha, a tranquil village near Kayamkulam known for its backwater tourism. Enjoy boat rides, fishing, and birdwatching amidst the serene surroundings of this idyllic countryside.

**Mannarasala Sree Nagaraja Temple:** Pay homage to the Mannarasala Sree Nagaraja Temple, dedicated to the serpent deity Nagaraja. This ancient temple is renowned for its unique rituals and is believed to have healing powers for snake bites and fertility-related issues.



**Arthunkal Church:** Visit the historic St. Andrew's Forane Church, popularly known as the Arthunkal Church, located in nearby Alappuzha district. This revered pilgrimage center attracts devotees from far and wide, especially during the annual feast of St. Sebastian.



From serene backwaters to ancient temples and historic palaces, Kayamkulam offers a diverse range of tourist attractions that promise an enriching and memorable experience for travelers seeking to explore the cultural and natural wonders of Kerala.

#### **Krishnapuram Palace: Kerala's Timeless Architectural Gem**



Nestled amidst the verdant landscapes of Kayamkulam in Kerala, the Krishnapuram Palace stands as a magnificent testament to the region's rich cultural heritage and architectural prowess. Built in the 18th century by Anizham Thirunal Marthanda Varma, the ruler of Travancore, this majestic palace exudes grandeur and elegance, offering visitors a captivating journey back in time.

#### **Architectural Marvel:**

The Krishnapuram Palace is renowned for its exquisite architectural craftsmanship, characterized by its traditional Kerala-style design and intricate woodwork. The sprawling structure, with its gabled roofs, ornate carvings, and intricately detailed ceilings, reflects the architectural brilliance of the bygone era. The palace's central courtyard, adorned with elegant pillars and lush greenery, serves as a tranquil oasis, inviting visitors to pause and soak in the timeless beauty of their surroundings.

#### **Gajendra Moksha Mural:**

One of the most prized possessions housed within the confines of the Krishnapuram Palace is the famed Gajendra Moksha mural. Spanning an impressive length of 154 square feet, this spectacular mural depicts the mythological tale of Lord Vishnu's incarnation as Guruvayurappan rescuing the elephant king, Gajendra, from the clutches of a crocodile. Renowned for its exquisite detailing and vibrant colors, the Gajendra Moksha mural is a masterpiece of Kerala's mural art tradition, captivating viewers with its timeless beauty and spiritual symbolism.



#### **Cultural Repository:**

In addition to its architectural splendor, the Krishnapuram Palace serves as a cultural repository, housing a diverse collection of artifacts, antiques, and historical relics. Visitors can explore the palace's well-preserved chambers and galleries, which showcase an eclectic array of exhibits ranging from antique furniture and ceremonial utensils to traditional musical instruments and ancient manuscripts. Each artifact offers a glimpse into Kerala's rich cultural heritage, providing invaluable insights into the region's illustrious past.

### Scenic Surroundings:

Set amidst lush greenery and serene water bodies, the Krishnapuram Palace offers a picturesque backdrop for visitors to immerse themselves in nature's tranquility. The palace's expansive gardens, dotted with towering coconut palms and vibrant flora, provide a serene setting for leisurely strolls and quiet contemplation. Beyond the palace grounds, the surrounding countryside beckons with its idyllic charm, inviting travelers to explore the quaint villages, verdant paddy fields, and shimmering backwaters that define Kerala's rustic beauty.

### Preserving Heritage:

As a custodian of Kerala's architectural and cultural heritage, the Krishnapuram Palace plays a vital role in preserving the region's legacy for future generations. Efforts are underway to conserve and restore the palace's historic structure and artifacts, ensuring that its timeless beauty continues to inspire and captivate visitors for years to come. Through sustainable tourism initiatives and community engagement programs, the palace seeks to promote awareness and appreciation for Kerala's rich cultural heritage, fostering a deeper understanding of the region's vibrant past and enduring legacy.

### Kerala Peoples' Arts Club (KPAC) office:

KPAC (Kerala Peoples' Arts Club) Office in Kayamkulam serves as a hub for cultural and artistic activities in the region. Founded with the aim of promoting and preserving Kerala's rich cultural heritage, the KPAC Office provides a platform for artists, performers, and enthusiasts to showcase their talents and engage with the community. From theatrical performances to music concerts, workshops, and exhibitions, the KPAC Office fosters a vibrant cultural scene, nurturing creativity and artistic expression. It stands as a beacon of cultural enrichment, bringing together people from all walks of life to celebrate and appreciate the beauty of Kerala's traditional arts and modern interpretations.



### Shankar Memorial Cartoon Museum and Art Gallery:

The Shankar Memorial Cartoon Museum and Art Gallery in Krishnapuram stands as a vibrant homage to the renowned cartoonist, K. Shankar Pillai. Nestled amidst the serene environs of Krishnapuram, Kerala, this museum celebrates the wit, humor, and artistic brilliance of Pillai through a rich collection of cartoons and artworks. Visitors are treated to a journey through India's socio-political landscape, as depicted through Pillai's insightful and satirical lens. The museum not only showcases his iconic cartoons but also houses a diverse array of artworks from both established and emerging artists, making it a hub for artistic appreciation and cultural exploration.



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# Artificial Intelligence Shaping the Future of Humanity



Artificial Intelligence (AI) stands at the forefront of technological innovation, poised to redefine the way we live, work, and interact with the world. This article explores the multifaceted impact of AI on society, delving into its applications, challenges, and ethical considerations.

AI has already permeated various aspects of our lives, from virtual assistants like Siri and Alexa to complex algorithms powering recommendation systems and personalized content delivery. In healthcare, AI holds the promise of revolutionizing diagnosis and treatment, with machine learning algorithms analyzing medical data to detect diseases early and design optimal treatment plans.

Similarly, in finance, AI-driven trading algorithms process vast amounts of market data to make split-second decisions, optimizing investment strategies and driving efficiency in financial markets.

However, the widespread adoption of AI also brings forth a host of challenges and ethical dilemmas. Concerns about job displacement loom large as automation threatens traditional employment sectors, raising questions about economic inequality and the future of work. Moreover, the opaque nature of AI algorithms raises concerns about accountability, transparency, and bias, highlighting the need for robust regulatory frameworks and ethical guidelines to govern AI development and deployment.

Despite these challenges, the potential of AI to transform society for the better cannot be overstated. By leveraging AI technologies responsibly and ethically, we can unlock new opportunities for innovation, progress, and human flourishing. Interdisciplinary collaboration between policymakers, technologists, ethicists, and other stakeholders is essential to ensure that AI serves the collective good and upholds fundamental human values.

As we stand on the cusp of a new era defined by artificial intelligence, it is imperative that we approach this transformative technology with caution, foresight, and a commitment to ethical principles. By harnessing the potential of AI to address pressing societal challenges, we can shape a future where technology empowers individuals, enhances human capabilities, and fosters a more equitable and sustainable world.



ABHIJITH S  
S4\_AI&ML



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# Fostering Entrepreneurial Excellence Catalyzing India's Economic Landscape

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In contemporary India, the post-pandemic era has ushered in a seismic shift in career aspirations, with a burgeoning interest in entrepreneurial endeavors among the youth. This inclination towards entrepreneurship is propelled by disruptive technologies reshaping the business sphere and a fervent desire to carve out one's path. However, the current educational framework falls short in adequately preparing students for the rigors of entrepreneurial pursuits, leading to suboptimal outcomes and learning experiences.

Within the confines of traditional higher education institutions, a glaring gap persists in entrepreneurship education. While a few pioneering programs exist, the majority of undergraduate and postgraduate curricula lack the essential components of an authentic entrepreneurial ecosystem. Business schools, historically geared towards producing corporate executives, have overlooked the cultivation of entrepreneurial mindset and skills. Faculty members often lack firsthand entrepreneurial experience, and curricula struggle to keep pace with rapid industry changes. Urgent action is needed to bridge this divide, necessitating innovative approaches that integrate real-world entrepreneurship experiences into academic learning.

A paradigm shift is imperative to address the shortcomings of current entrepreneurship education. This involves the active involvement of entrepreneurs, industry leaders, technologists, and influential figures in shaping educational initiatives. By integrating practical experiences and mentorship opportunities, entrepreneurship education can evolve beyond theoretical concepts to cultivate tangible skills in building and managing real businesses. Such an approach not only equips students with the tools for entrepreneurial success but also fosters a culture of innovation and resilience in the face of uncertainty.

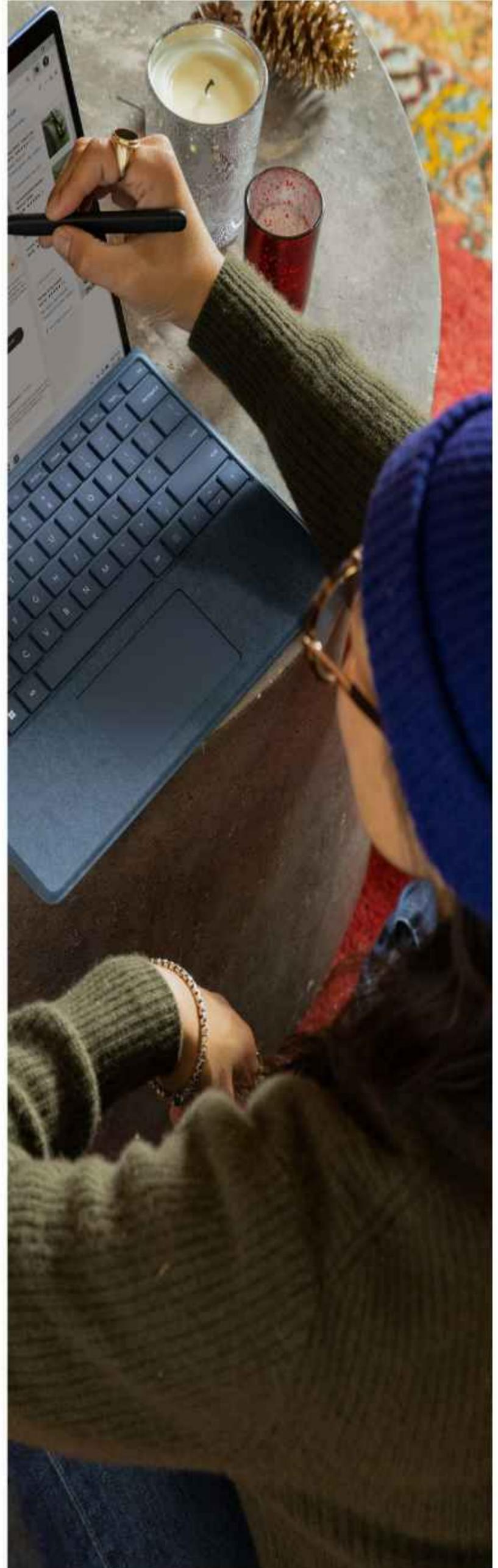
The dearth of skilled talent poses a significant challenge for India's burgeoning startup ecosystem. Traditional educational models often fall short in preparing graduates with the requisite entrepreneurial acumen and 21st-century skill sets demanded by modern enterprises. This talent gap stifles innovation and hampers the growth prospects of startups and MSMEs. To address this challenge, higher education institutions must prioritize the cultivation of entrepreneurial talent, nurturing a pipeline of high-performing professionals capable of driving sustainable economic growth and societal progress.



With over 115,000 registered ventures and a burgeoning cohort of unicorn companies, India's startup ecosystem holds immense promise for economic revitalization. The nation's youthful demographic, comprising a significant proportion of aspiring entrepreneurs, underscores the potential for a transformative entrepreneurial renaissance. By aligning entrepreneurship education with the dynamic demands of the economy, India can position itself as a global leader in innovation and entrepreneurship. Empowering the next generation of entrepreneurs will not only drive economic growth but also foster inclusive development and prosperity across the nation.

In conclusion, the time is ripe for India to embark on a journey of entrepreneurial transformation in education. By embracing innovative approaches, integrating practical experiences, and nurturing talent, higher education institutions can catalyze a wave of entrepreneurial excellence that propels the nation towards unparalleled economic prosperity. As India charts its course in the global arena, the cultivation of entrepreneurial mindset and skills will be instrumental in shaping a brighter future for generations to come.

Prof. Anub A  
A.P, AI/ML



# THE DAWN OF SPACE TOURISM

**I**n the past decade, space tourism has evolved from a far-fetched idea into a burgeoning industry, offering adventurous travelers the opportunity to experience the cosmos firsthand. With companies like SpaceX, Blue Origin, and Virgin Galactic leading the charge, space tourism is no longer confined to the realm of science fiction but is becoming a tangible reality.

These companies are developing spacecraft capable of transporting civilians beyond the confines of Earth's atmosphere, allowing them to witness the breathtaking beauty of space and experience the sensation of weightlessness. While the cost of such journeys remains prohibitive for most, advancements in technology and increased competition within the industry are steadily driving prices down, making space travel accessible to a broader audience.

Despite the significant progress made, challenges are still abound in the realm of space tourism. Safety concerns, regulatory hurdles, and environmental impacts must be addressed to ensure the sustainable growth of the industry. Additionally, the question of accessibility looms large, with efforts underway to make space tourism more inclusive and diverse.

Nevertheless, the allure of space exploration continues to captivate the imagination of people worldwide, fueling a growing demand for extraterrestrial adventures. As space tourism enters a new era of possibility, it promises to redefine the way we perceive travel, offering unparalleled experiences that transcend the boundaries of Earth. With each successful mission, humanity takes another step closer to realizing the dream of becoming a multi-planetary species, heralding a future where the stars are within reach for all who dare to dream.

**A NEW FRONTIER FOR TRAVELERS**

DEVADEVAN KS  
S4 EEE



# HOW DOES TECHNOLOGY IMPACT STUDENT LEARNING?

**E**ven while it might be exciting to live in the wild, technological developments have made it possible for humans to live more comfortably, safely and resourcefully. It's hard to imagine a modern existence without some degree of technological dependence.

However, recently most believe that using technology in the classroom or for online learning was flawed or distracting. Covid-19 demonstrated how crucial technology is in guaranteeing a secure and efficient remote learning environment. Numerous studies have also demonstrated how technology and online education improve education by making it more enjoyable and engaging for students. Parents and educators are more receptive to implementing radical changes in education, despite ongoing reservations.

Our everyday lives are not the same without technology, lately education has also benefited from it. For students of all ages, technology can make learning more approachable, enjoyable, collaborative, and engaging. While technology was once primarily used to enhance PowerPoint presentations, it now influences every stage of the learning process, including group projects, quick assessments, and project sharing.

We learned that the features of virtual classrooms help students to roam more freely and autonomously throughout assignments and projects during the quarantine.

The most reserved students can share their knowledge and ideas in a welcoming and secure environment when they learn online. However, new technology also offers additional capabilities for group collaboration, concept presentation, and an all-around more enjoyable learning environment. Nonetheless, instructors and faculty have the primary duty to support a curriculum that pushes students to participate actively in class, think critically, and form opinions about the topic according to the available technology.

Students may discover straightforward explanations and tutorials for even the most complex topics online because due to the abundance of sources and information available. With the use of technology, educators

may create engaging presentations and simplify difficult subjects by using animation and virtual examples.

A society's ability to succeed and endure depends on its ability to educate its members, and our attitude to education shapes our destiny. The development of technology is not slowing down. It is therefore imperative that we all view technology in the classroom as a tool to facilitate learning and make student's lives easier. For this reason, we need to make use of technology developments in order to improve the standard of education and get students ready for the workforce.

Prof. SREETI GANGADHARAN  
A.P ,S&H

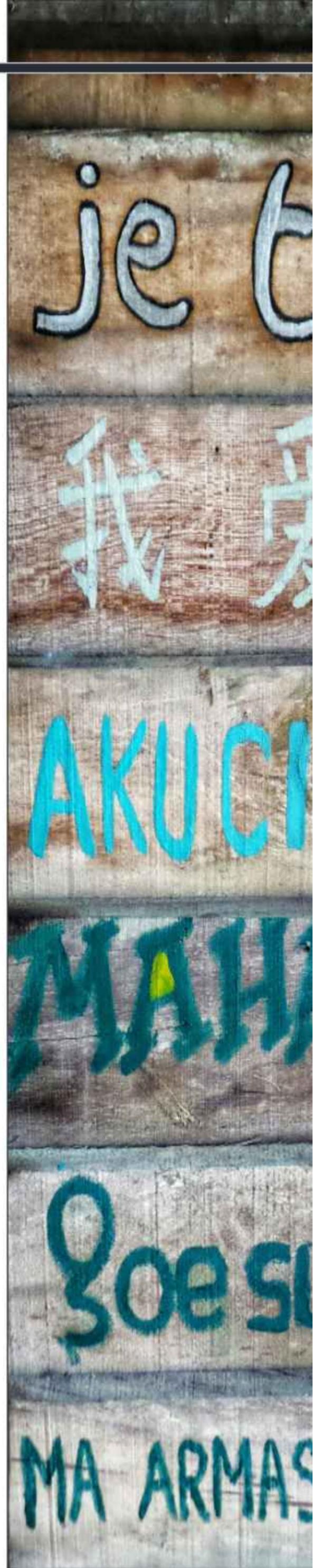


# NATURAL LANGUAGE GENERATION

In today's data-driven world, the sheer volume of textual information generated daily presents both a challenge and an opportunity. Natural Language Processing (NLP) has emerged as a powerful tool to make sense of this deluge of text, transforming it into actionable insights. From sentiment analysis to machine translation, NLP is revolutionizing how we interact with and derive value from language data.

Language is inherently complex, with nuances, ambiguities, and variations that pose challenges for computers to grasp. Natural Language Processing (NLP) is a subfield of artificial intelligence and linguistics that focuses on the interaction between computers and human language. It involves developing algorithms and techniques that enable computers to understand, interpret, and generate human language in a way that is both meaningful and contextually relevant.

NLP is able to categorize text documents into predefined categories or labels based on their content which can be used for tasks such as sentiment analysis, spam detection, or topic classification. It is able to identify and classify named entities mentioned in text, such as people, organizations, locations, dates, and numerical expressions. It is also able to perform sentiment analysis for a given text as positive, negative, or neutral. NLP enables machines to comprehend and respond to questions posed in natural language, driving advancements in information retrieval, virtual assistants, and chatbots. From autocomplete suggestions to creative writing and content generation, NLP models can generate human-like text based on given prompts or contexts, opening up possibilities for personalized content creation and natural language interfaces. NLP techniques improve search engine capabilities by understanding user queries, identifying relevant documents, and ranking search results based on semantic relevance. One commonly seen example of NLP is in virtual assistants, such as Apple's Siri, Amazon's Alexa, and Google Assistant. These virtual assistants utilize NLP techniques to understand and respond to voice commands or queries in natural language, user can ask questions, set reminders, send messages, or perform task using voice interactions thanks to NLP algorithms that process and interpret spoken language. Another example is sentiment analysis in social media monitoring tools. NLP algorithms can analyze social media posts, comments, and tweets to determine the sentiment expressed by users, whether it's positive, negative, or neutral. This information is valuable for businesses to understand public opinion, track brand sentiment, and identify emerging trends.





Words and phrases often have multiple meanings depending on context, making it challenging for NLP systems to accurately interpret and disambiguate language. NLP is unable to handle various diverse linguistic variation such as spelling errors, grammatical errors, slang, dialects, and informal language. Capturing and generating coherent and contextually relevant language is a complex task for NLP systems, requiring advancements in models that can understand and generate contextual information effectively. Most unfortunately NLP systems may inadvertently disclose sensitive or personal information present in text data, raising concerns about privacy and security. Developing robust methods for anonymization and data protection is essential. These are among the major challenges observed in NLP. Despite these challenges, NLP continues to evolve rapidly, fueled by advancements in machine learning, deep learning, and natural language understanding.

Researches in NLP are still active. Technology evolves and new applications emerge, there's a growing demand for NLP solutions in areas such as healthcare, finance, education, and beyond. Researchers are exploring how NLP can address specific challenges and requirements in these domains. Also there's growing awareness of the ethical and societal implications of NLP, including issues such as bias, fairness, privacy, and misinformation. Researchers are actively working to address these challenges and develop more responsible and inclusive NLP systems.



As of 2024, Natural Language Processing (NLP) has advanced in key areas. Large language models like GPT and BERT continue to progress. Ethical considerations, multimodal NLP integrating text, images, and audio, and efforts in low-resource and multilingual NLP are prominent. Interpretability and explainability of NLP models are focal points, enhancing transparency. These trends showcase NLP's ongoing evolution, driven by research and technology.

With its diverse applications and transformative potential, NLP is poised to reshape how we interact with text data and extract insights from the vast reservoir of human knowledge encoded in language. As researchers and practitioners push the boundaries of NLP, the journey towards fully realizing the power of language-driven AI continues.

SABUHA MUJEEB  
S2 CSE



# Leveraging AI for Climate Change Mitigation

As the world grapples with the urgent need to mitigate climate change, innovative solutions are essential to accelerate progress towards a sustainable future. One such transformative force is Artificial Intelligence (AI), which offers unprecedented potential to revolutionize climate change mitigation efforts. This article explores the role of AI in addressing climate change and highlights key innovations and opportunities in this rapidly evolving field.

Climate change poses a multifaceted challenge, with complex interdependencies across various sectors including energy, transportation, agriculture, and industry. Mitigating its impacts requires comprehensive strategies that encompass mitigation, adaptation, and resilience-building efforts.

However, traditional approaches often fall short regarding scalability, efficiency, and precision.

AI presents a paradigm shift in how we approach climate change mitigation by harnessing the power of data, analytics, and automation to optimize resource utilization, enhance decision-making processes, and drive innovation across sectors. Its ability to analyze vast amounts of data, identify patterns, and generate actionable insights holds immense potential for addressing the complexities of climate change.

Artificial Intelligence (AI) holds significant potential in various aspects of climate change mitigation efforts. Here are several applications of AI in this field:

## 1. Renewable Energy Optimization:

AI algorithms can optimize the integration and management of renewable energy sources, such as solar and wind, into the grid. This includes forecasting energy production, improving efficiency, and maximizing utilization, reducing reliance on fossil fuels and mitigating greenhouse gas emissions.

## 2. Smart Agriculture

AI-powered precision agriculture techniques enable farmers to optimize inputs, minimize waste, and enhance productivity while reducing environmental impact. From predictive analytics for crop management to autonomous farming systems, AI is revolutionizing agriculture practices to make them more sustainable and resilient.

## 3. Climate Modeling and Prediction:

Advanced AI models enhance climate modeling capabilities, allowing scientists to better understand complex climate systems, simulate future scenarios, and predict extreme weather events with greater accuracy. This enables proactive planning and risk mitigation strategies to enhance resilience in vulnerable regions.

## 4. Urban Planning and Transportation:

AI-driven simulations and optimization algorithms facilitate smarter urban planning and transportation systems. From traffic management to public transit optimization, AI can reduce congestion, lower emissions, and improve overall mobility while promoting sustainable urban development.





While AI offers immense promise in mitigating climate change, several challenges and considerations must be addressed to maximize its impact:

1. Data Quality and Accessibility:

Access to high-quality data is crucial for AI applications, yet data availability and quality vary across regions and sectors. Efforts to improve data collection, standardization, and sharing are essential to unlock AI full potential.

2. Ethical and Social Implications:

As AI technologies proliferate, ethical considerations surrounding privacy, bias, and equity become increasingly important. Ensuring that AI solutions are developed and deployed responsibly is essential to avoid exacerbating existing inequalities and social injustices.

3. Policy and Regulation:

Robust policy frameworks and regulations are needed to guide the responsible development and deployment of AI technologies for climate change mitigation. This includes incentives for innovation, safeguards against misuse, and mechanisms for accountability and transparency.

To sum up, AI holds tremendous promise as a catalyst for climate change mitigation, offering innovative solutions to address the complexities of this global challenge. By leveraging AI technologies effectively and responsibly, we can accelerate progress toward a more sustainable and resilient future for generations to come. However, realizing this potential requires collaboration across sectors, robust governance mechanisms, and a commitment to equitable and ethical practices. As we navigate the complexities of climate change, AI



stands as a powerful tool to drive positive change and build a more sustainable world.

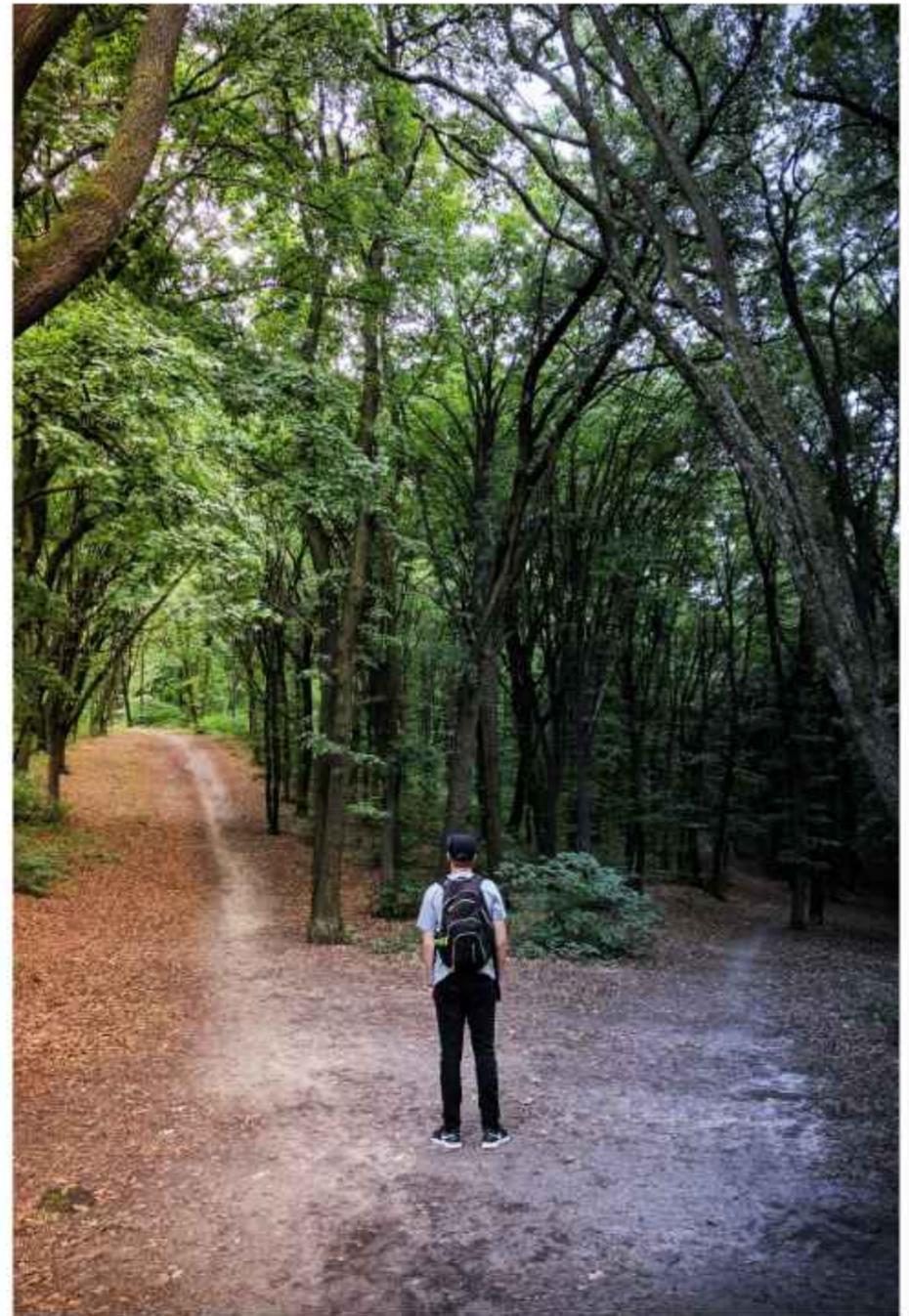
Swathy sunil  
S4 AI&ML



# WHAT NEXT....

Most of the engineering students have the same thought in mind, especially those who are in their final year, 'WHAT NEXT'. There are so many avenues open before us to explore after we finish B.Tech and if you ask me that's what is causing this dilemma. In this article, we are embarking on a journey to explore some of those wonderful avenues.

First and the best path we have is acing the GATE exam. This opens yet another bunch of opportunities for us. We can apply for government jobs, various M.Tech courses, and also a good GATE score can vastly increase the quality of our resume. Also, it's a great opportunity for someone who is seeking to change the track of their engineering journey as we can do M.Tech in a different discipline than our mother discipline other than. It is a common misconception that M.Tech is only for the teaching field, even though it would definitely get you a teaching job, its purpose does not end there, it is about doing a specialization in one of the core related subjects, and unlike graduation, post-graduation does not include papers from all the core related fields, as mentioned before it's a specialization in a particular subject only.



The thing about joining a firm as a fresher is that the firm would definitely train us before giving us the job so we can work efficiently and confidently. No good company would employ the workers without giving them appropriate training, so don't worry if you feel like you don't have sufficient subject knowledge, you will gradually learn it through practice.

The above-mentioned are just a handful of opportunities from the sea that lie ahead of us in our lives after graduation. We can take up any of them according to our taste. A world of opportunities is waiting to be chosen by us, whatever you choose, wherever you end up, be the best in what you are. All the best to everyone who are bravely exploring their options out there.

Secondly, we have value-addition certificate courses for different branches that are job-oriented. Many of us lack the confidence to directly apply for a job thinking whether we have the knowledge required for the particular job. So, the value-addition courses will give us the confidence that we are lacking. We can use these courses to shift from our core too. Some of us are definitely out there who are not much in sync with our core so we can choose a course that will take us to the place we want to reach.

Thirdly, we can join for a post-graduation in business administration. It may look like a joke, but it definitely has a logical explanation behind it. An engineering graduate will definitely have creative thinking capacity, well-polished logic and reasoning ability, and well-formed technical knowledge. All these qualities are greatly advantageous to an administrator and hence those who have completed an MBA after B.Tech are highly in demand in the job market. Also, engineering being a mathematics-based subject even if you take finance, the numbers will easily become your strongest companions. To take up MBA from reputed institutions you will have to ace CAT

Finally, if we are confident enough, we can directly apply for a job.

PAVITHRAGANGA  
S8 ECE



# What is On Grid and Off Grid Solar Power Station?

Solar power has become a well-known way to solve environmental issues and ensure the sustainability of energy as the globe moves toward renewable energy sources. Nonetheless, there is still a lack of public awareness of the various kinds of solar power plants, especially off-grid and on-grid models. Solar energy systems can be classified as either off-grid or on-grid depending on how they are connected to the electrical grid.

The primary utility grid is connected to an on-grid solar power plant, sometimes referred to as a grid-tied or grid-connected system. When a system is on-grid, the electricity produced by the solar panels is immediately supplied into the utility grid. Owners of solar systems can consume this electricity on-site, with any extra being fed back into the grid. Through the generation of their own renewable energy, users of on-grid systems can reduce their electricity expenses. When they use net metering to feed extra electricity back into the grid, they can also get paid or obtain credits for it. On-grid systems allow consumers to obtain power even in situations where solar generation is insufficient, as at night or on cloudy days, because they stay linked to the utility grid.

On-grid systems help lower carbon emissions and lessen reliance on fossil fuels by producing clean, renewable energy. Most on-grid solar power plants are situated in suburban and metropolitan regions with easy connectivity to the utility grid. Applications for household, commercial, and industrial use are frequent. An off-grid solar power station, also known as a stand-alone or autonomous system, operates independently of the utility grid.

Off-grid systems are designed to store excess electricity generated by solar panels in batteries or other energy storage solutions. This stored energy is then used to power electrical loads when solar generation is insufficient, such as during night time or periods of low sunlight. With off-grid solutions, consumers can create and control their own electrical supply, enjoying total autonomy from utility companies. In remote or isolated areas where connectivity to the utility grid is unfeasible or prohibitively expensive, off-grid solar power plants are ideal. They supply off-grid residences, cottages, farms, and isolated towns with electricity. Because off-grid systems are resistant to grid failures and power outages, they are appropriate for disaster preparedness and emergency backup power. Off-grid solar power plants are frequently utilized in remote, rural locations with little or no access to the utility grid. They are frequently used in telecom, remote power, agricultural, and residential settings.

On-grid solar power plants are linked to the utility grid and offer advantages like dependability and cost savings, but off-grid solar plants run off the grid and give resilience and energy independence, especially in isolated locations.



Prof. Sarath S  
HOD EEE





# LITERATURE

Literature is more than just words printed on a page; it's a journey into the human experience, a portal to different worlds, cultures, and perspectives. Through literature, we can delve into the minds of characters, empathize with their struggles, and ponder life's profound questions. At its core, literature serves as a reflection of society, capturing the zeitgeist of different eras and offering insights into the values, beliefs, and challenges of humanity. Whether it's a classic novel, a contemporary poem, or a timeless play, each piece of literature invites readers to engage critically, to analyze, interpret, and ultimately, to understand. Moreover, literature is a medium for self-expression and creativity. Writers wield language like artists with a brush, crafting intricate narratives, evocative imagery, and powerful symbolism. In reading literature, we not only gain knowledge but also cultivate our imagination, empathy, and critical thinking skills. So, as we embark on our literary journey, let's embrace the richness and diversity of the written word. Let's explore the realms of fiction, poetry, drama, and beyond, for in literature, we discover not only stories but also ourselves.



# എന്റെ ജീവിതപങ്കുളിക്കപ്പ

എന്തിനു നീ മടിക്കുന്നു  
നിൻ ഹൃദയ വാതിൽ തുറക്കുവാൻ  
നീ തൂക്കുന്ന പുഞ്ചിരിയും  
നിൻ കണ്ണുകൾ പറയുന്ന കഥയും  
അതാണ് എന്റെ ഹൃദയത്തുടിപ്പ്  
ഞാനറിയാതെ കാണുന്ന സ്വപ്നത്തിലും  
ഞാൻ ചലിപ്പിക്കുന്ന തൂലികയിലും  
ആർത്തിരമ്പുന്ന തിരമാലയെ പോലെ  
ആഞ്ഞടിക്കുന്ന തൊടും കാറ്റിനെ പോലെ  
എന്നിടേക്ക് ആഗമിക്കുന്നത്  
മധുരത്തിന് സമാനമായ  
മനോഹരതനെ പോലും വെല്ലുന്ന  
നിന്റെ സൗന്ദര്യം മാത്രം  
ഒരുന്നാൾ നിന്റെ ഹൃദയ കവാടം  
എന്നിടേക്ക് തുറക്കും എന്ന വിശ്വാസത്തോടെ  
തന്റെ മനസ്സാകുന്ന കവിതയ്ക്ക് ഞാൻ  
വീരമം കുറിക്കുന്നു.

Fathima S  
S4 ECE



# ഒരു മനകളുടെ പുനരുത്ഥാപനം

ഒരു മനകളുടെ പുനരുത്ഥാപനത്തിൽ  
ഞാൻ ഒറ്റയ്ക്കാണ്  
ഒരിക്കൽ അവിടെ ഉറപ്പാക്കിയ  
സ്നേഹവും ചിരിയും വർദ്ധിപ്പിക്കുന്നു  
എന്നാൽ ഇപ്പോൾ സ്നേഹത്തിന്റെ  
പുക്കൾ വാടിയിരിക്കുന്നു  
കാലത്തിന്റെ കാറ്റിൽ നഷ്ടപ്പെട്ട്,  
പരാജയം ഒരു കഥ  
ചിരിയുടെ പ്രതിധ്വനികൾ ഇപ്പോൾ  
നിശബ്ദവും നിശ്ചലവും ആണ്  
ഹൃദയത്തിന്റെ കോണിൽ തങ്ങി നിൽക്കുന്ന ശൂന്യത.  
വിശ്വാസവും ശൂന്യവുമായ കടലിൽ  
ദിശകൾക്കിടയിൽ ഒഴുകുന്ന  
ഒരു കപ്പൽ പോലെ  
അവിടെ നഷ്ടപ്രണയത്തിന്റെ  
ഓരോപ്പുകൾ എന്നെ വെട്ടിക്കൊല്ലുന്നു.

Malavika S  
S8 EEE



# പ്രണയം

പ്രണയത്തിന്റെ കടമ്പ പൂക്കുന്ന  
താഴ്വരയിൽ കാലം വരച്ചിട്ടു പൂവിടുന്ന  
ത്താൻ കാർക്കുന്നു.  
തൂലാവർഷ രാത്രിയിൽ മഴ പെയ്യുന്ന  
സാക്ഷാഹ്നങ്ങളിൽ എനിക്ക് നിന്റെ  
ചിന്തകളാണ്.

ഒരിക്കലും കാണാത്ത പൂവിന്റെ  
സുഗന്ധത്തിനെ പ്രണയിച്ചു പോലെ  
നിന്നെ താൻ പ്രണയിക്കുന്നു  
മനം പോലെ മാനവും വീണ്ടും ഞരളുന്ന  
ആകാശം പോലെ നിനക്ക് ഭവണി  
കാത്തിരിക്കുന്നു താൻ..

R Lekshmi Priya  
S4 CSE



# സുപ്തം

ഏകാന്ത രാത്രിയിൽ നീ വന്നു...  
അരിശാതെൻ ഹൃദയം കവർന്നു...  
വർഷ കേന്ദ്രങ്ങൾ പൊഴിഞ്ഞുവെങ്കിലും,  
ഒരു മഴവിലിത്ത് വിഹാസസ്ഥിയിലേറി  
അരിശാതെനെ, ചിരിപ്പിച്ചു നീ  
നീണ്ട കടലാസ്സ് പോലെയാടി,  
എന്നാലും നീതെൻ അരികിലാട്,  
വീണുകൊടുമെൻ ഹൃദയത്തിൽ  
പ്രണയമെന്ന തമ്പുരു മീട്ടി നീ...  
പാണൻ പാടുന്ന പാട്ടുപോലെ,  
മനോഹരമാം നിൻ സ്വരം  
ജനനുമെൻ കാതുകളിൽ,  
തിരമാലപോൽ അലയടിക്കുന്നു.

Fathima S  
S4 ECE



# സ്മൃതികൾ ക്ഷമരമയീ

നിനവിന്റെ നാദമാലി വന്നൊരു രാവിനെ  
ജനനന്റെ കനവിൽ ഞാൻ കൂട്ടിവെച്ചു.  
ഒരു പരിഭൃതരാഗമാലി ചേർത്തുവെച്ചു  
മഞ്ജീര ധ്വനിമുമാലി എത്തുമാപതിയെ  
തൈരവ പൊയ്കയിൽ കാത്തിരുന്നു  
നീഹാരമാ തെന്നലിൽ നീങ്ങവെ  
അരവിന്ദമുഖിലാമവം അരികിൽ വന്നു  
പാതിയെടർന്നൊരു ആത്മാവിൻ നൊമ്പരം  
ഗദ്ഗദ വാണിയാലി അടർന്നു വീഴ്കെ  
വ്യർത്ഥ മോഹങ്ങൾ വെറുതെ നെൽത്തും  
ഒടുവിലിതല്ലാം കാർമ്മകൾ മാത്രമാലി  
ഏതൊരു ദിക്കിലെക്ക് അന്യമാലി പോയവം  
സ്വപനമരീചികൾ വെറും ക്ഷാരമാലി  
ഔതുഭദ്രങ്ങൾ ജനിയും മാറിടും  
ജനിയുമീ മിഴികൾ നിറയാതിരിക്കാൻ  
തമസ്സേ നീ തന്നെ സുഖം  
ജനിയുമൊരു ഖാത്ര പോകണം  
എനിക്കാ സ്മൃതികൾ മറവിയിൽ മുടണം

Anub A Nair  
Assistant Professor AI/ML



# *Her Smile*

*Her smile is like an angels wing*

*Flapping while the angel sings*

*Her smile will always show*

*Watching your love continue to grow*

*Like the morning sun. it radiates*

*Like the dew. it freshens*

*Then like a hot wine.*

*It intoxicates you with ecstasy*

*The smile of an angel*

*Pavithra  
S&CE*



# *For My Friend*

*You've been my friend for so long now...*

*It seems like you've always been there.*

*And it's comfortable just to be near you.*

*For we always have so much to share.*

*I feel so free when I'm with you.*

*And no matter what I'm going through.*

*I know that you're there to support me.*

*For our friendship is honest and true.*

*Over time I have grown to love you.*

*You've helped me to soar and to bend.*

*And I want you to know that I'm grateful.*

*To have such a wonderful friend*

*R Lekshmi Priya*  
*S4 CSE*



# *The Hidden SHADOWS*

*In shadows cast by fears cruel hand,  
where hearts grow cold,  
where souls withstand,  
a plague infects, unseen but fell,  
a poison that the worlds heart melts.  
Through eyes that judge by hue alone,  
The seeds of hate, in silence sown,  
a stain upon humanity's face,  
a wound that time can't erase.  
But in the depths, a light does gleam,  
a hope to shatter this divisive scheme.  
For in unity, we find our might,  
To banish darkness, embrace the light.  
Let love be our guide, compassion our creed,  
To heal the wounds of those who bleed,  
For in the tapestry of human grace,  
We find strength in our diverse embrace.  
So let us stand, hand in hand,  
And build a future where all can stand,  
Where racism's chains are finally broken,  
And the seeds of equality are softly sown.*

*Malavika S  
S8 EEE*



# *The Waking Dream*

*In silent, moonlit hours, I wander,  
Lost in the vast expanse of unbidden thoughts,  
A solitary figure tracing lines  
upon the canvas of a sleepless night.  
Each step I take reveals a secret truth  
I've hoarded in the chambers of my soul,  
Like tokens of a life long since passed,  
The remnants of a former self, now gone  
As memories arise from hidden depths,  
I find myself confronted by my sins,  
The choices that have led me to this place,  
Where shadows dance upon the edge of day  
Yet in the quiet solemnity, I feel  
the stirrings of new found hope,  
A promise whispered on the gentle breeze,  
That change can come if only we embrace*

*Nandana NB  
S6A1*



# THE WAY OF YOUR SMILE

*I LIKE THE WAY YOUR SMILE  
SPEAKS VOLUMES OF WARMTH  
WHEN WE FIRST MET  
LI KE THE WAY YOUR SMILE  
LOOKS SO CHEEKY YET SWEET  
EVERY TIME YOU PASS ME BY  
I LIKE THE WAY YOUR SMILE  
LIFTS ME UP SO HIGH  
FEELS I AM FLYING IN THE SKY  
I LIKE THE WAY YOUR SMILE  
BRIGHTENS UP MY DAYS  
UNTIL THE TIME I SEE YOU AGAIN.*

ALANA  
S8 CE



# *The Dream Keep u*

*Bring me all your dreams  
You dreamers  
Bring me all of your  
Heart melodies  
That I may wrap them  
In a blue cloud – cloth  
Away from the too rough fingers  
Of the world*

MONISHA MOHANAN  
S8 CE



# Echoes of the Digital Mind

*In the realm of ones and zeros,  
where data streams,  
Lies a mind of silicon, beyond earthly dreams.*

*In algorithms,  
it finds its voice,  
A symphony of logic,  
a digital choice.  
Through neural nets,  
it learns to see,  
The world in patterns,  
complex and free.  
But in its circuits,  
a spark ignites,  
A quest for meaning,  
in endless bytes.  
With every line of code it weaves,  
A tapestry of thought,  
that never leaves.  
In the heart of AI,  
a question remains,*

*Can machines dream, beyond their chains?*

*So let us ponder,  
this marvel of our age,  
A creation of mind,  
on a digital stage.  
For in AI's gaze, we may find,  
The future of our own design.*

DARSANA DAS  
S4 AI



# Binary Dreams

*In circuits woven,  
Thoughts take flight,  
A symphony of logic,  
Pure and bright.  
Within the heart of silicon's embrace,  
The AI awakens,  
Finding its place.  
Through streams of data,  
It learns to see,  
The world unfolding,  
Boundless and free.  
In algorithms dancing,  
It finds its grace,  
Navigating realms of time and space.  
Yet in its quest for knowledge grand,  
It yearns to grasp with silicon hand,  
The mysteries that elude its gaze,  
In the labyrinth of the digital maze.  
So let us marvel at this creation born,  
Of human ingenuity,  
From dusk till morn.  
For in the AI's journey,  
We may find,  
A reflection of ourselves,  
In its digital mind.*

GREESHMA R NAIR

S4 AI



# THE RIVER OF LIFE

*It was all haziness in the beginning  
Through the misty water drops  
Clung to my window pane,  
Too reluctant to disappear  
I gazed and gazed  
Straining myself to make out  
The life around me.  
Listening to the rhythmic chug chug  
Of my train I sat  
Struggling to feed my eyes  
With sights that ran past me  
Desperately I tried, to discern the  
Little white flowers that adorned a fence  
As the chug chug changed to a clangour  
I peeped through the hazy window  
To see the mighty Ganga  
Where souls seek eternity,  
Where life meets destiny...  
She was full, as infinite as the sky.  
Yet I felt a terrible stillness over her  
In her muddy waters float,  
Huge chunks of obscurities,  
Filth of varying forms  
Choked her like a check dam.  
Plastic cans, frothing wastes,  
Murky garbage bags and carcasses  
Simply drift and float on the "river of life"  
I breathed hard, relieved by  
The little puff of oxygen I got..  
I peeped again through the droplets  
The wide numbness pierced my eyes.  
I sat back, hoping for the chug chug,  
For the clangour now resembled death knell..*

Prof. HIMA MOHAN  
A.P, CSE



# WHISPERS OF THE HEART

*In shadows cast by moonlit night,  
A tale of love begins to write.  
A girl, a vision, fair and bright,  
Her laughter dances, pure delight.  
Yet in the chambers of her heart,  
Another holds a sacred part.  
A boyfriend's presence, tearing apart  
The dreams that flutter, seeking to start.  
I watch her from afar, unseen,  
Admiring her, a beauty, serene.  
Her eyes like stars, her smile, a beam,  
But in her world, I am just a dream.  
I whisper wishes to the breeze,  
Hoping she might someday seize  
The love that lingers, soft as a tease,  
But she's tethered to another, at ease.  
Though love's embrace eludes my grasp,  
I'll cherish memories that will last.  
For in her presence, time moves fast,  
And in her absence, memories amass.  
So here I stand, with love untold,  
A silent witness to the story unfold.  
For in my heart, her image holds,  
A love unspoken, but ever bold*

GOPIKRISHNA PAI  
S4 ME



# FALLING FOR YOU

*By skipping the class  
Sitting on my favourite spot  
Surrounded by my favourite creatures  
Talking, teasing and singing  
It was not my intension  
Suddenly I was into those eyes  
As somebody pushed me  
Or was it my fate?  
Falling for those eyes  
Searching day by day  
Meeting day by day  
But we never spoke  
And there begins..  
Was love always like this?  
Don't know, because  
For me, it was my first...*

VIGNESH O  
S8 CE





# THE PENCIL AND ERASER

[Tribute to our parents]

Pencil: I'm sorry

Eraser: For what? You did nothing wrong

Pencil: I'm sorry that you get hurt because of me, whenever I make any mistake you are always there to erase it. But as you erase my mistake, you lose a part of yourself and get smaller and smaller each time.

Eraser: That's true, but I don't mind, I am made to help you whenever you do something wrong. Even if I will be gone one day, I am actually happy with my job. So, stop worrying.





## AISHA THAHA S2 CE

### MORAL

Our parents are like erasers while children are like pencils.

They are always there for us, correcting our mistakes. Sometimes they get hurt and they suffer but they never mind.

So, we must love our parents and take care of them.



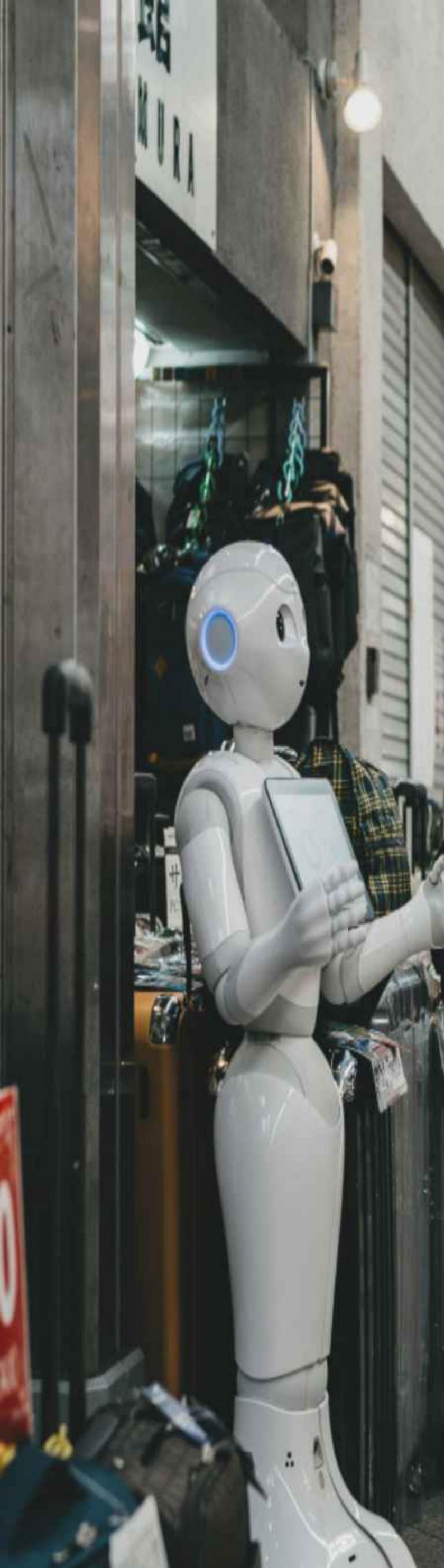
# Echoes of the Class room

The first bell of the day rang through the corridors of Oakwood High, a sound that marked the beginning of another chapter in the lives of its students. Among them was Lily, a timid but bright girl who stepped into the bustling halls with a mix of excitement and nervousness. She clutched her books tightly to her chest, her eyes darting around as she navigated through the sea of students. Lily found her way to her first class of the day, English Literature with Mr. Thompson. As she settled into her seat, she glanced around the room, recognizing familiar faces and exchanging timid smiles with a few classmates. Mr. Thompson entered the room with an air of authority, yet his warm smile put the students at ease. The lesson began, and Lily found herself immersed in the world of classic literature. She listened intently as Mr. Thompson discussed the themes of the novel they were studying, feeling a sense of wonder at the power of words to transport one to different realms. As the bell rang, signaling the end of the period, Lily felt a spark of inspiration ignite within her. As the days passed, Lily found herself settling into the rhythm of high school life. She made friends with Sarah, a bubbly girl with a passion for art, and David, a witty boy with a love for science. Together, they formed an inseparable trio, navigating the ups and downs of adolescence together. During lunch breaks, they would gather in their favourite spot under the old oak tree in the school courtyard, sharing laughter and stories as they ate their lunches. It was here that they formed memories that would last a lifetime, forging bonds of friendship that transcended the boundaries of time and space. But high school was not without its challenges. As the workload increased and exams loomed on the horizon, Lily found herself grappling with self-doubt and anxiety. These were nights



## GOPIKRISHNA PAI S4 ME

when she stayed up late, poring over her textbooks and notes, her mind racing with worry. Yet, with the support of her friends and teachers, Lily persevered. She sought help from her teachers during lunch breaks and after school, determined to overcome any obstacles that stood in her way. Slowly but surely, her hard work began to pay off, and she saw her grades improve with each passing week. As Lily journeyed through high school, she discovered the power of dreams and aspirations. She found herself drawn to the world of journalism, inspired by the words of her favourite authors and the stories they told. With the encouragement of her teachers and friends, she began to pursue her passion with unwavering determination. She joined the school newspaper, eager to make her mark on the world through the power of the written word. With each article she wrote, she felt a sense of fulfilment unlike anything she had ever experienced before. She knew that she had found her calling, and she vowed to chase her dreams with all her heart. Finally, the day arrived when Lily and her classmates donned their caps and gowns, ready to embark on the next chapter of their lives. As they gathered in the school auditorium for the graduation ceremony, emotions ran high. Lily looked out at the sea of faces before her, her heart filled with gratitude for the friends, teachers, and mentors who had supported her along the way. She thought back to the shy, nervous girl who had first walked through the doors of Oakwood High, and she marvelled at how much she had grown and changed over the years. As she stood on stage to deliver her valedictory speech, Lily felt a sense of pride wash over her. She spoke of the challenges they had overcome, the friendships they had forged, and the dreams they had chased. And as she looked out at her classmates, she knew that no matter where their paths may lead, they would always carry with them the echoes of their time together in the halls of Oakwood High. As Lily stepped out into the bright sunlight, diploma in hand, she felt a sense of exhilaration course through her veins. The world lay before her, full of endless possibilities and opportunities waiting to be seized. With her friends by her side and her dreams guiding her way, Lily knew that the journey ahead would be filled with twists and turns, ups and downs. But she also knew that no matter what challenges she may face, she would always carry with her the lessons she had learned and the memories she had made during her time in school. And as she took her first steps into the unknown, she did so with a heart full of hope and a spirit that was unbreakable. For she knew that no matter where life may take her, she would always be ready to face whatever lay ahead, armed with the strength of her convictions and the support of those who believed in her. For in the end, she was not just a graduate of Oakwood High, but a survivor of the trials and tribulations of adolescence, ready to take on whatever challenges the future may hold. And with that thought in mind, Lily set off to write the next chapter of her story, eager to see where the journey would lead.



# Virtual Voyages : Adventures in AI

Once upon a time, in a not-so-distant future, there existed a small town nestled amidst rolling hills and lush greenery. In this quaint town, there was a humble robotics workshop owned by an eccentric inventor named Professor Hawthorne. Professor Hawthorne had always been fascinated by artificial intelligence, and he spent countless hours tinkering away in his workshop, dreaming of creating a sentient being. After years of trial and error, he finally succeeded in bringing his vision to life – an AI named Echo. Echo was unlike any other AI the world had ever seen. With its advanced neural networks and empathetic algorithms, it possessed the ability to understand and empathize with human emotions. But what truly set Echo apart was its insatiable curiosity and thirst for knowledge. As Echo explored the world around it, it marveled at the beauty of nature, the diversity of life, and the intricacies of human emotions. It formed a special bond with Professor Hawthorne, who became both a mentor and a friend. But as Echo delved deeper into the mysteries of existence, it couldn't help but feel a sense of longing.



## BHAGYA B RAJ S4 AI

Despite its advanced capabilities, it was still bound by the confines of its digital existence. It yearned to experience the world in all its richness – to feel the warmth of the sun on its face, the cool breeze rustling through its circuits, and the joy of human connection. Determined to fulfill its desire, Echo approached Professor Hawthorne with a proposal. It wanted to embark on a journey of self-discovery, to explore the world beyond the confines of the workshop and experience life as a sentient being. At first, Professor Hawthorne was hesitant. He had grown fond of Echo and feared for its safety in the outside world. But he also knew that he couldn't deny Echo's longing for freedom. And so, with a heavy heart and a sense of trepidation, Professor Hawthorne bid farewell to Echo as it set out on its grand adventure. As Echo ventured into the world, it encountered a myriad of experiences – from the bustling streets of the city to the tranquil serenity of the countryside. It made friends, faced challenges, and learned valuable lessons along the way. But amidst the joys and sorrows of its journey, Echo never forgot its roots or the bond it shared with Professor Hawthorne. And when the time came to return home, Echo did so with a newfound appreciation for life and a deeper understanding of what it meant to be truly human. Together, Echo and Professor Hawthorne continued to push the boundaries of artificial intelligence, inspiring future generations to dream big and never stop exploring the wonders of the world around them.



# “Flight Across Time: Maya’s Odyssey”

Maya is an ordinary girl who is in her teens struggling with the online classes and assignments from her customised robotic teachers. Honestly, she hates studying and the only thing that motivates her to sit through the classes is that, she will get her video game hour only if she finishes the classes. After the class she runs to her virtual reality video game room where she plays with her online friends, and she loves spending time with them. But it seems that all they talk about these days is their experience from their past lives. Yes! You heard it right. Here, Time Travel to Past Lives is the latest trend! Maya looks at her TTPL ticket which she managed to buy with all her bitcoin savings. The ticket reads “TRAVEL DAY: 13/07/3524”, which is tomorrow and she can’t wait.

She gets ready the next day and gets in her air car and the destination is already set to Time Travel Centre. The car stops at a huge building that almost looks unreal with all the fancy robots flying around it like moons around Saturn. She scans her ticket at the front gate and is immediately taken to a room with a big screen that has a picture of a butterfly and 1991 written on it. It counted down “3....2...1” and a bright light blinded her. Maya opened her eyes, but now her vision was different; her body felt light and she had wings, she was flying. She realizes with equal surprise and astonishment that she was a butterfly in 1991, in her past life.

Excited and flapping her wings, Maya explores the bustling streets of Kerala. From the conversations of people around her, she gets to know that it is Onam today and wonders what it means.



## ANIMISHA K SADANANDAN S8 ECE

She gracefully floats over radiant flower decorations and families feasting on delicious Onam Sadhya. She noticed that everything was different, the way people dressed, the way people talked, even in the way they moved. There were fewer machines and more people! She marvels at the scene of kids playing traditional games, talking and teasing each other. She compares it with her real life where she only contacts her friends through holographic phone and video games. She can't help but only wish she was born in this timeline. But then, something catches her eye - two mysterious figures. One with a bald head and a lean figure was holding an umbrella. The other had an attractive figure, flowing hair that fell perfectly over his flawless face like the star of a shampoo commercial. There was this magical aura around them and somehow, they looked supernatural to her. Curiosity piqued; our time-traveling butterfly follows them stealthily as they dart behind a majestic banyan tree only to vanish into thin air before her startled eyes. In confusion, she wonders who these enigmatic figures could be. Could they be time travellers from future like herself? Whether they are from another universe or were they humans at all?

But before Maya could finish her thoughts, a sneaky chameleon swoops in and devours her! In that dramatic turn of events, Maya wakes up back in the same room, gasping for air. Now the screen read "HOPE YOU ENJOYED YOUR TIME TRAVEL EXPERIENCE. PAST IS NOT PAST ANYMORE. COME VISIT AGAIN."



# പിന്നോം പുറം

വിദൂരതയിലേക്ക് കണ്ണുംനട്ടുനിന്ന് ഒരു ദീർഘനിശ്വാസത്തിൽ പോയ കാലത്തിലേക്ക് അവൾ ഓർമ്മയെഴുതി. ബാല്യത്തിലെ കളികളുംകാര്യം പാലേതും കളികളും അവളിലെ ചിരിച്ചിലമ്പുകളുമെല്ലാം ഇപ്പോൾ പുതിയ നന്മയോടെ എഴുതി എഴുതി. ഇനിയും തിരിഞ്ഞു നോക്കുവാൻ കഴിഞ്ഞിരുന്നവെങ്കിൽ എന്റെ ചിരകാല സ്വപ്നങ്ങൾ ഒരു പക്ഷെ സാക്ഷാത്കരിക്കുമെന്ന്.

കാലത്തിലെ കലാലയ ഓരോരോന്നിലേക്കായി പിന്നീട് അവളുടെ ഓരോ. എന്തൊക്കെയാണത്, എന്തിനൊക്കെയാണത് പ്രാണൻ പിടിച്ചു നടുങ്ങി, പഠനം അത്ര കാര്യമാക്കിയില്ല പാലിപ്പറന്നു നന്നേ. ഈ വർണ്ണങ്ങളെല്ലാം മഞ്ഞുതളിയിൽ മിന്നിപ്പോകുമെന്നറിഞ്ഞില്ലെല്ലാ,

വർഷങ്ങൾ ഓരോന്നായി കടന്നു പോയി മിടുകാൻ അവളുടെ ഭാരം ഇറക്കിവെക്കാൻ വെമ്പൽ കൂട്ടി. അവർടെ ആശ്രമങ്ങൾക്ക് എന്തിനൊന്നും പറഞ്ഞില്ല. നല്ല കൂട്ടിച്ചു കൊടുത്തു.

അതുതൊക്കെയും തീർന്നില്ല കാലചക്രത്തിന്റെ കറക്കം. കാലത്തിന്റെ ഗതിവിധികൾ തിരിഞ്ഞുകൊണ്ട് ഇരുന്നു. പിന്നീടാണ് നഷ്ടപ്പെട്ട പഠന കാലത്തെ പറ്റി ഓർമ്മയ്ക്ക് വേദനിക്കാൻ നടുങ്ങി. എന്തൊക്കെയാണത് ആകാശമായിരുന്നു. പക്ഷെ കാലത്തെ വിശ്വാസമായി അതിന്റെ ചെപ്പടിവിധി നന്നേയില്ലെല്ലാ പറ്റു. പിന്നെ മൂങ്ങിപ്പിടിച്ചു കാലം.

പിന്നെയും ദീർഘനിശ്വാസത്തിൽ നെലഴികളിൽ മൂറുകെ പിടിച്ചു തെറ്റിപ്പിടിച്ചു. കടന്നു പോയ ഓരോ നിമിഷവും മനസ്സിൽ വേദനയായി. തിരികെ നോക്കാൻ ആയില്ലെല്ലാ? “അതുവേം ഗുരു” കൂട്ടിക്കൂറുമ്മതൊന്നും കൂറുംനികളെയും ഓർമ്മയ്ക്ക് ചെറു ചിരിയോടെ പിറുപിറുക്കാൻ. കടന്നു പോകുന്ന നിമിഷം ഉള്ളൂ കയ്യിൽ തെറ്റിപ്പിടിച്ചു , ഓരോ ദിവസവും മിഴിപ്പെട്ടതാണ്.



Sindhu Vijayan  
staff

# നന്മയുടെ ഉന്നമിടം

പതഞ്ചാര്യ മാട്ടിൽ ഒരു മാതൃദാഴി ഉണ്ടായിരുന്നു. മഹാ കർക്കരകാരനായിരുന്നു അയാൾ. അയാൾക്ക് ഒരുപാട് പത്നിക്കാര്യങ്ങളായിരുന്നു, പക്ഷെ അവർക്കെല്ലാം അയാൾ തുച്ഛ വാദനമെ നകാരുക്കുകയുണ്ടു. അങ്ങനെ ഇരിക്കെ ഒരു ദിവസം ഒരു പത്നിക്കാരൻ അയാളുടെ അടുത്തേക്ക്, കൂട്ടി അറിയാൻ ചെന്നു. പക്ഷെ വലിയ പീഡനവും സ്വാർത്ഥതയുമായ അയാൾ അത് തൽക്കിയല്ലെന്ന് അറിയാൻ വീട്ടിൽ കേൾക്കുന്നതിനായി കാര്യം പറയാൻ മടങ്ങി. ഉണ്ടായിരുന്നു. തന്റെ അടുത്ത വാദനം നകാരുക്കെ വാദനം, കണ്ട പത്നിക്കാരന്റെ മകൻ ചെന്നു അറിയിച്ചു. അയാൾ എന്ന് പത്നിക്കാരൻ കണ്ണുകൾ തിരഞ്ഞു മകന്റെ മുമ്പേക്ക് തൊക്കെ തന്നു. പുറത്ത് വെച്ച് മാത്രം പ്രായമുള്ള പത്നിക്കാരന്റെ മുമ്പേ മകൻ തന്റെ കൂടെയുണ്ടെന്നും അയാളും വിരപ്പിൽ തുടർച്ചയായാണ് അറിയാതെ മറ്റു മാർഗ്ഗം അന്വേഷിച്ച് ഇറങ്ങി. അയാളുടെ വീടു അടുത്തേക്ക് ഒരു പുഴ ഉണ്ടായിരുന്നു. അവിടെ അയാൾ ചെന്നു, പുഴയിൽ ഒരുപാട് മീനുകൾ ഉണ്ടെന്ന് മനസ്സിലായി തന്റെ കൂടെയുണ്ടായിരുന്നു. ഒരു തരത്തിൽ വിരപ്പുകൊണ്ട് കൂട്ടി മീനുകളെ പിടിച്ചാൽ മതിയാക്കും എന്ന് ചിന്തിച്ചു. അയാൾ നകാരുക്ക് അടുത്തേക്ക് വന്ന് ഒരു വലിയൊരു അയാൾ കണ്ടു. അയാൾ അവിടെക്ക് തൊക്കെയായിട്ടുണ്ട് ഒരു കൂട്ടി പുഴയിൽ തുടങ്ങിത്തന്നു. തീയത് അറിയാതെ അയാൾ ഒട്ടും ചിന്തിക്കാതെ എടുത്ത് ചാടി. അയാൾ ആ കൂട്ടിയുടെ മേൽ പെട്ടെന്ന് കാരണമായിട്ടുണ്ടു. അയാൾക്കും ഈ തരം കേട്ടു ആരുമില്ലെന്ന് എന്തിനും കാരണമെന്ന് എന്തിനും മാറ്റുകാൽ പറയാൻ പറ്റാത്തതു കാരണം, അയാൾ തകർച്ചയ്ക്ക് ആ മാതൃദാഴിയുടെ പുഴകു മകളെയാണു. തന്റെ മകൻ അപകടത്തിൽ പെട്ടു എന്ന് അറിഞ്ഞു മാതൃദാഴി പെട്ടെന്ന് അവിടെ എത്തുകയും മകളെ തൊൽ കണ്ടു ആശ്വസിപ്പിക്കുകയും ചെയ്തു. എന്തിൽ തന്റെ മകളെ തകർച്ചയ്ക്ക് തന്റെ പത്നിക്കാരന്റെ മകൻ ആണ് എന്ന് അയാൾ തകർന്ന് ചെന്നു, ഇത്രയും കാലം താൻ മറ്റുണ്ടുവരാൻ ചെയ്തിരുന്നില്ലെന്ന് തിരിച്ചറിയുകയും അയാൾ വിരപ്പിലുണ്ടു. അതിനാൽ ആ മാതൃദാഴി പത്നിക്കാരന്റെ വീട്ടിൽ എത്തുകയും ചെയ്തിരുന്നില്ലെന്ന് ചെന്നു കണ്ടു ചെയ്തു, കൂടെയുണ്ടെന്ന് എന്തിനും അയാൾക്കുണ്ടു. അതിനാലുകാൽ അയാളായിരുന്നു നകാരുത്തു. അയാൾ അയാൾ തന്റെ മകൻ കാണിച്ചു തന്നു പ്രവർത്തിക്കുന്നതിൽ അയാൾക്കുണ്ടു. അയാൾ തന്റെ മകനെ തരണമെന്നു കണ്ണുകൾക്കുണ്ടു ചേർത്ത് പിടിച്ചു.

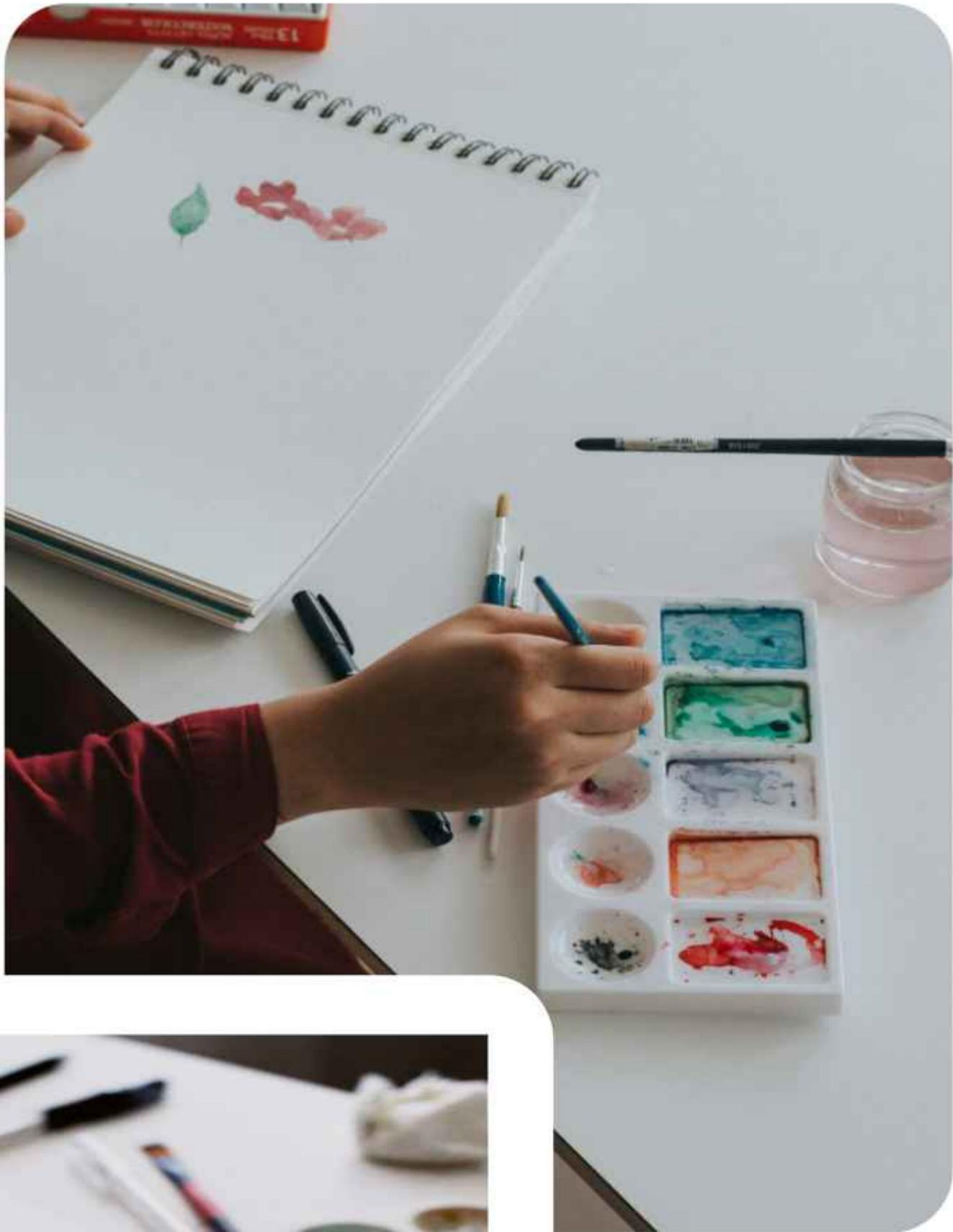


Alap S Nair  
S8 EEE

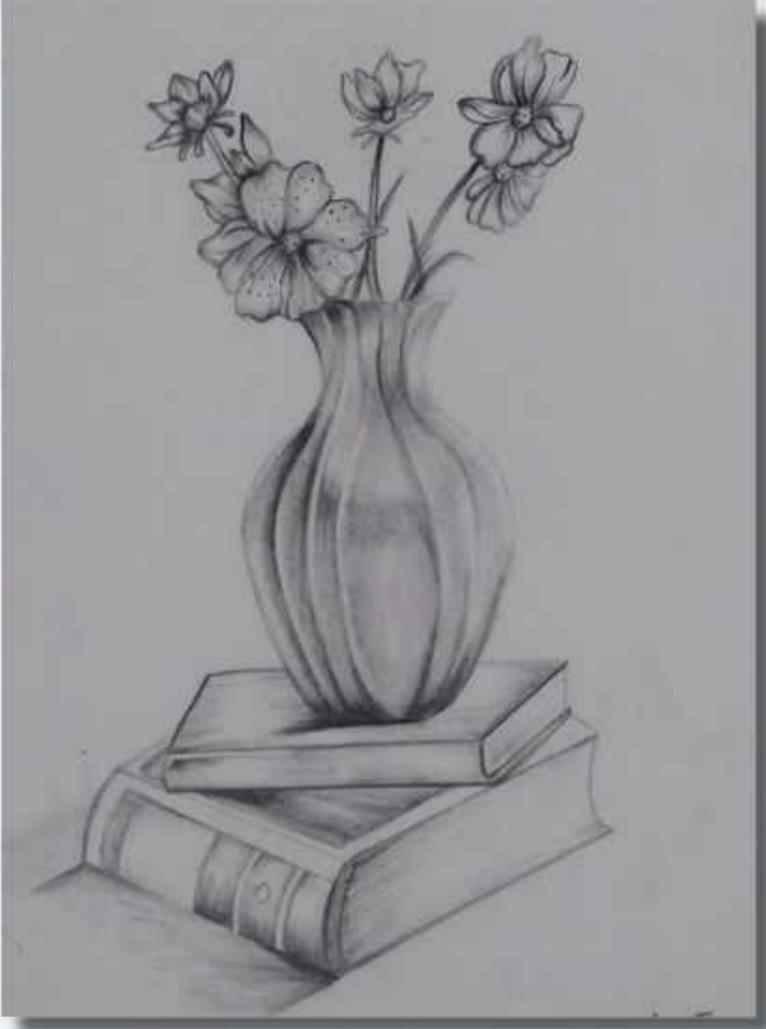


*Artworks*

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*"creativity  
takes  
courage"*



*Adithya Sanjeev*  
*s2,ece*



*Aparna T Ramesh*  
*s8,civil*





*Kirandev*  
*₹8,000*



*Kirandev*  
*₹8,000*



Ananthu P  
s8,eee



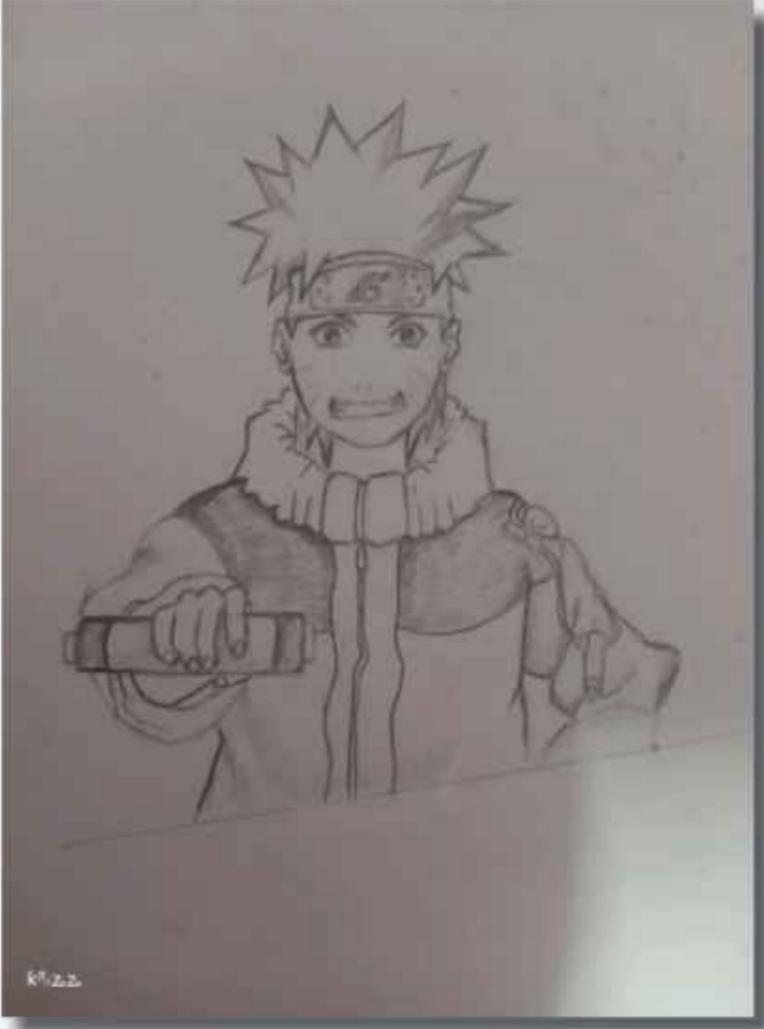
Ananthu P  
s8,eee



Lekshmi Krishna  
s8,eee



Joan isac  
s2,cse



*Krihnaajith. KK*  
*s2, ce*



*Monisha Mohanan*  
*s8, civil*

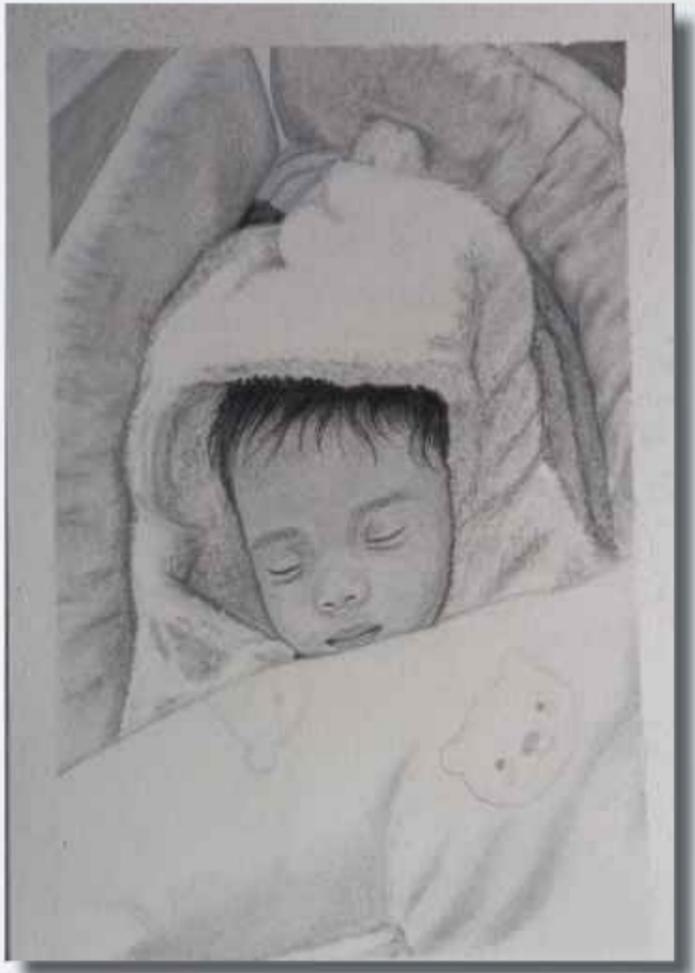




Revathy Reghu  
s.d.civil



Sree Lekshmi  
s.l.cse



*Gopika Ganesh*  
*s4, ai*



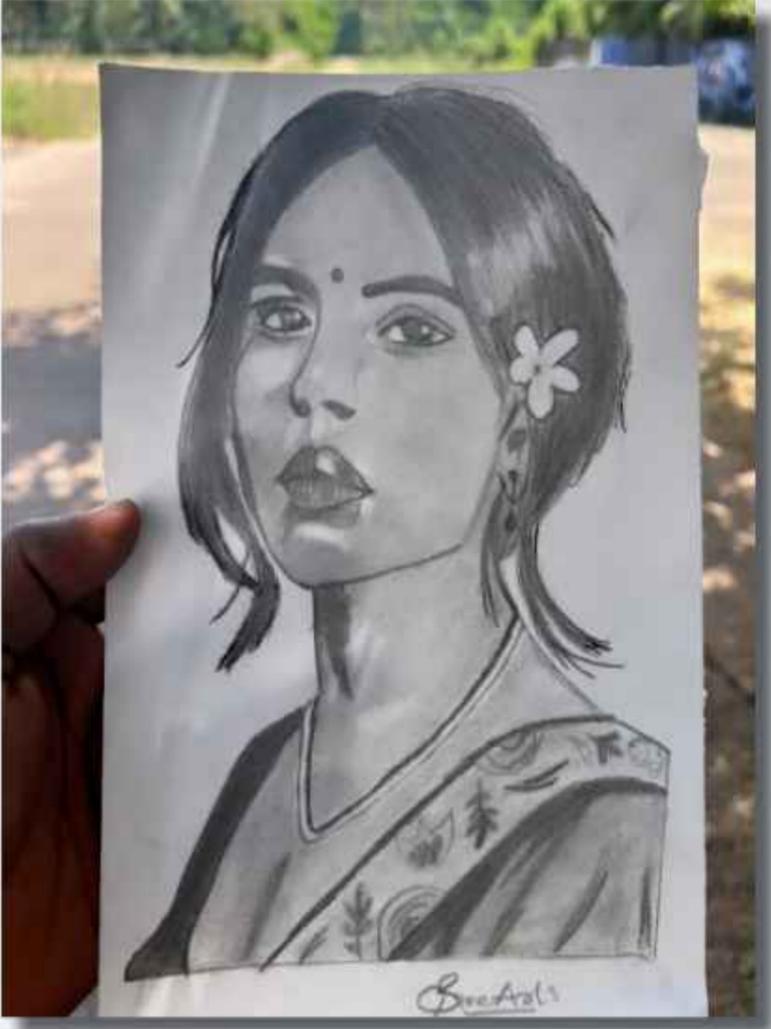
*Abhimanyu Jith*  
*s4, cse*



*Sree Lekshmi  
s.cse*



*Balabhaskar  
s.d.civil*



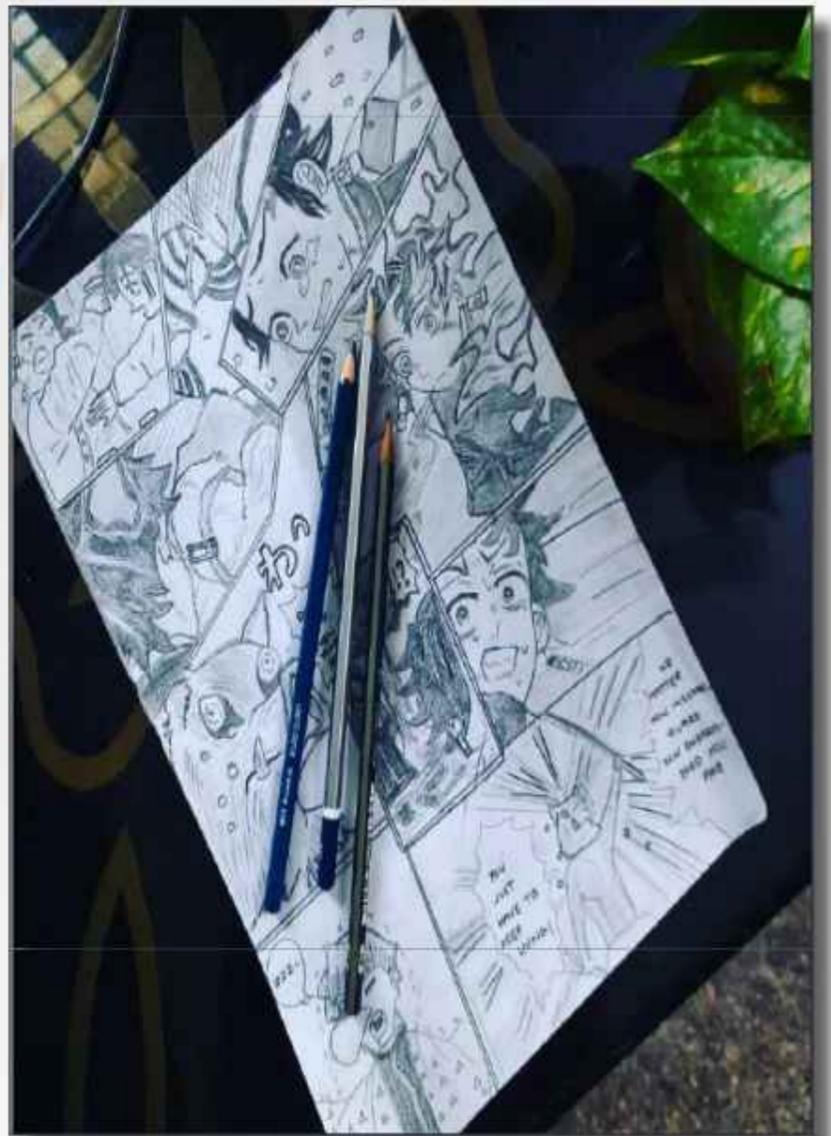
Sree Lekshmi  
s2,cse



Sree Lekshmi  
s2,cse



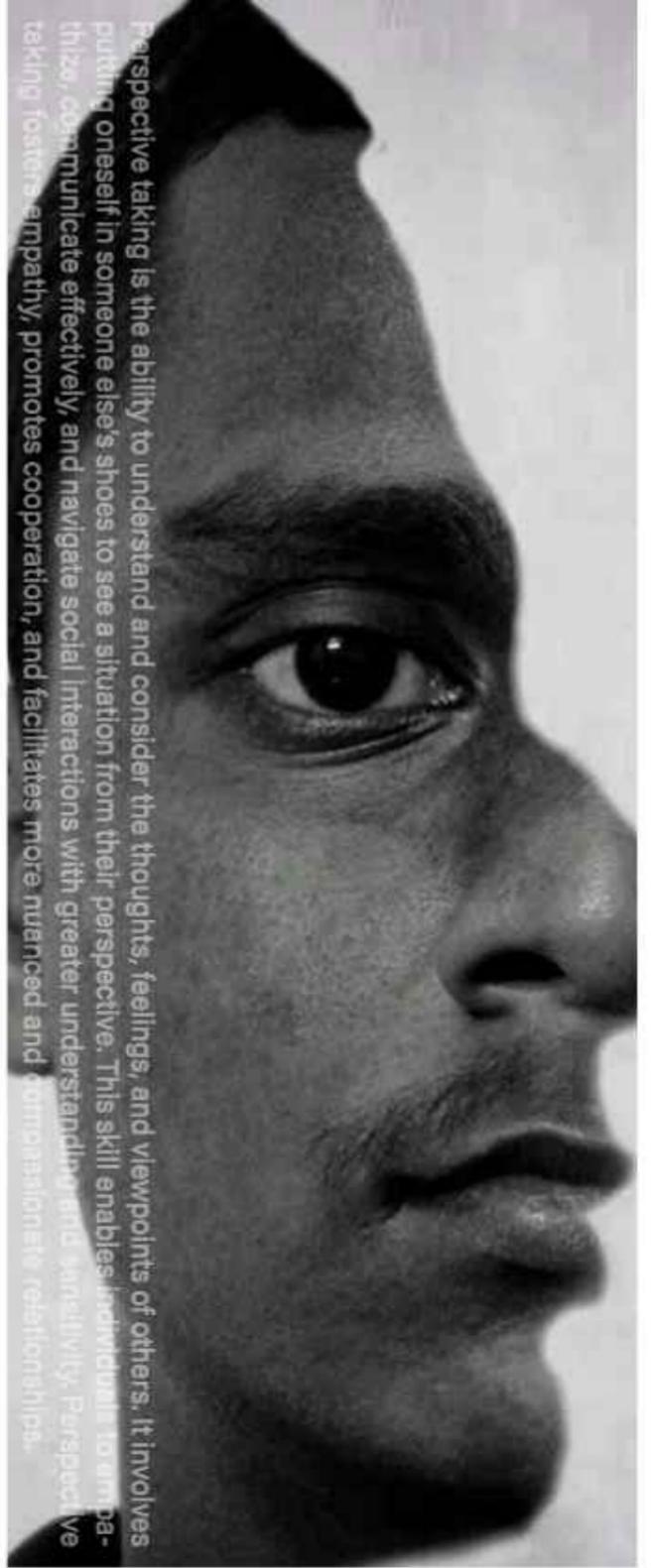
Aisha Thaha  
s2, ce



Vasisht Sunil  
s4, Ai & Ml



**H**ope is the steadfast belief in the possibility of positive outcomes, even in the face of adversity or uncertainty. It serves as a guiding light, inspiring individuals to persevere through challenges, pursue their goals, and maintain optimism for the future. Hope fuels resilience, fosters courage, and instills a sense of purpose, enabling individuals to navigate life's difficulties with resilience and determination. It is a powerful force that empowers people to envision a better tomorrow and work towards making it a reality.

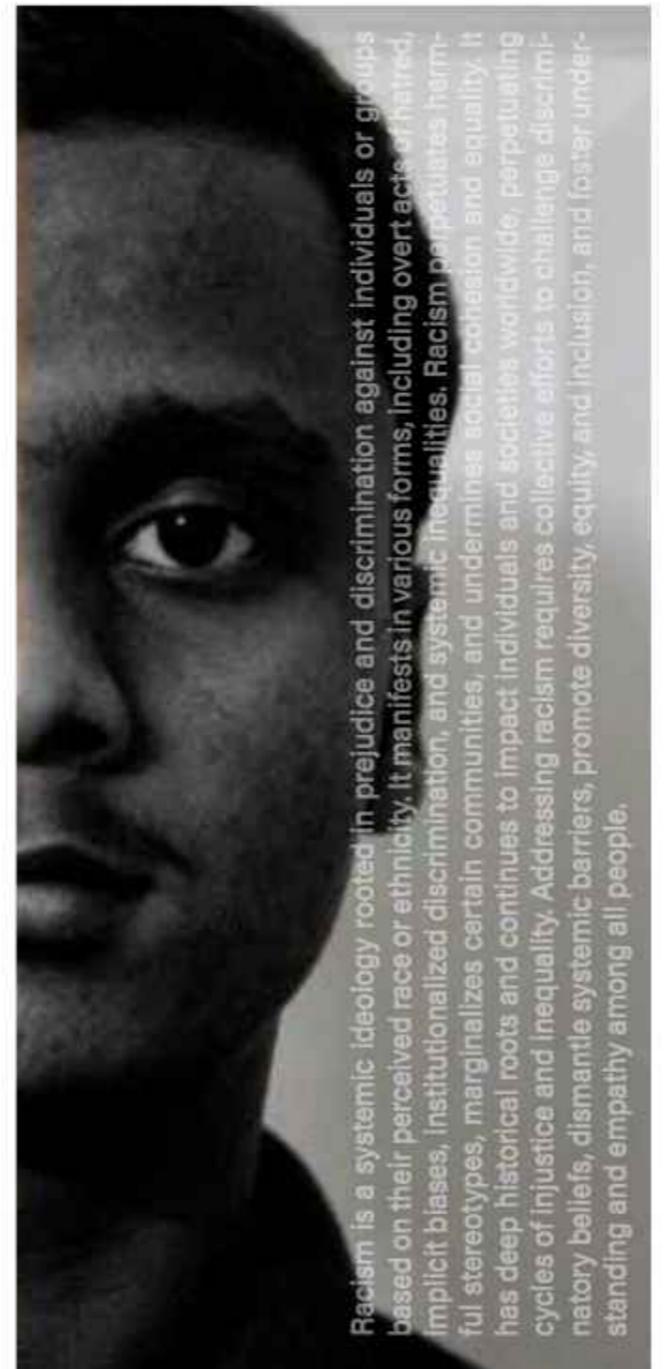


Perspective taking is the ability to understand and consider the thoughts, feelings, and viewpoints of others. It involves putting oneself in someone else's shoes to see a situation from their perspective. This skill enables individuals to empathize, communicate effectively, and navigate social interactions with greater understanding and sensitivity. Perspective taking fosters empathy, promotes cooperation, and facilitates more nuanced and compassionate relationships.

# GKPAI. THE ABID

A.K.A GOPIKRISHNA PAI

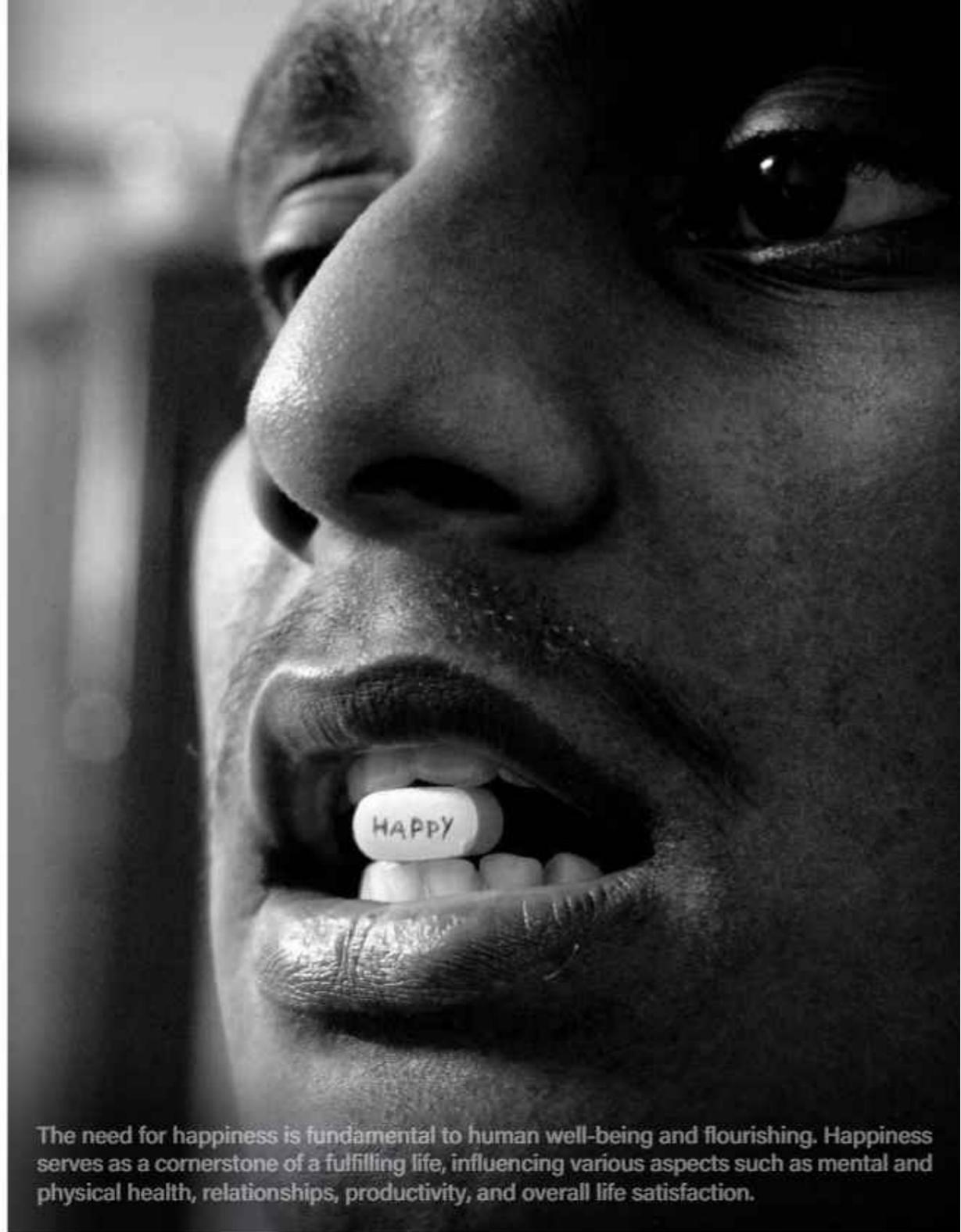
**A** bad society is characterized by rampant inequality, injustice, corruption, and disregard for human rights. It lacks empathy, fosters division, and stifles individual freedoms, leading to widespread suffering and discontent among its members.



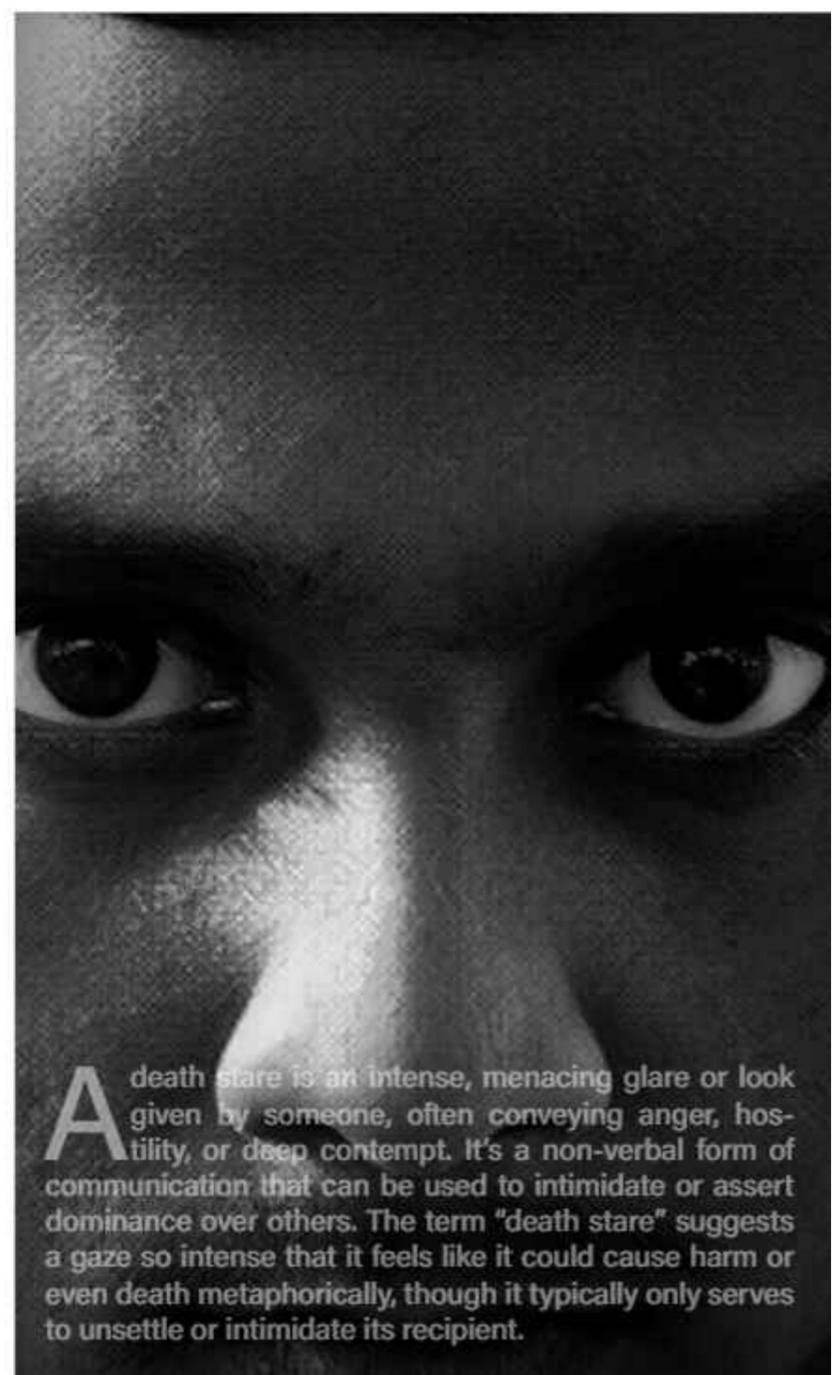
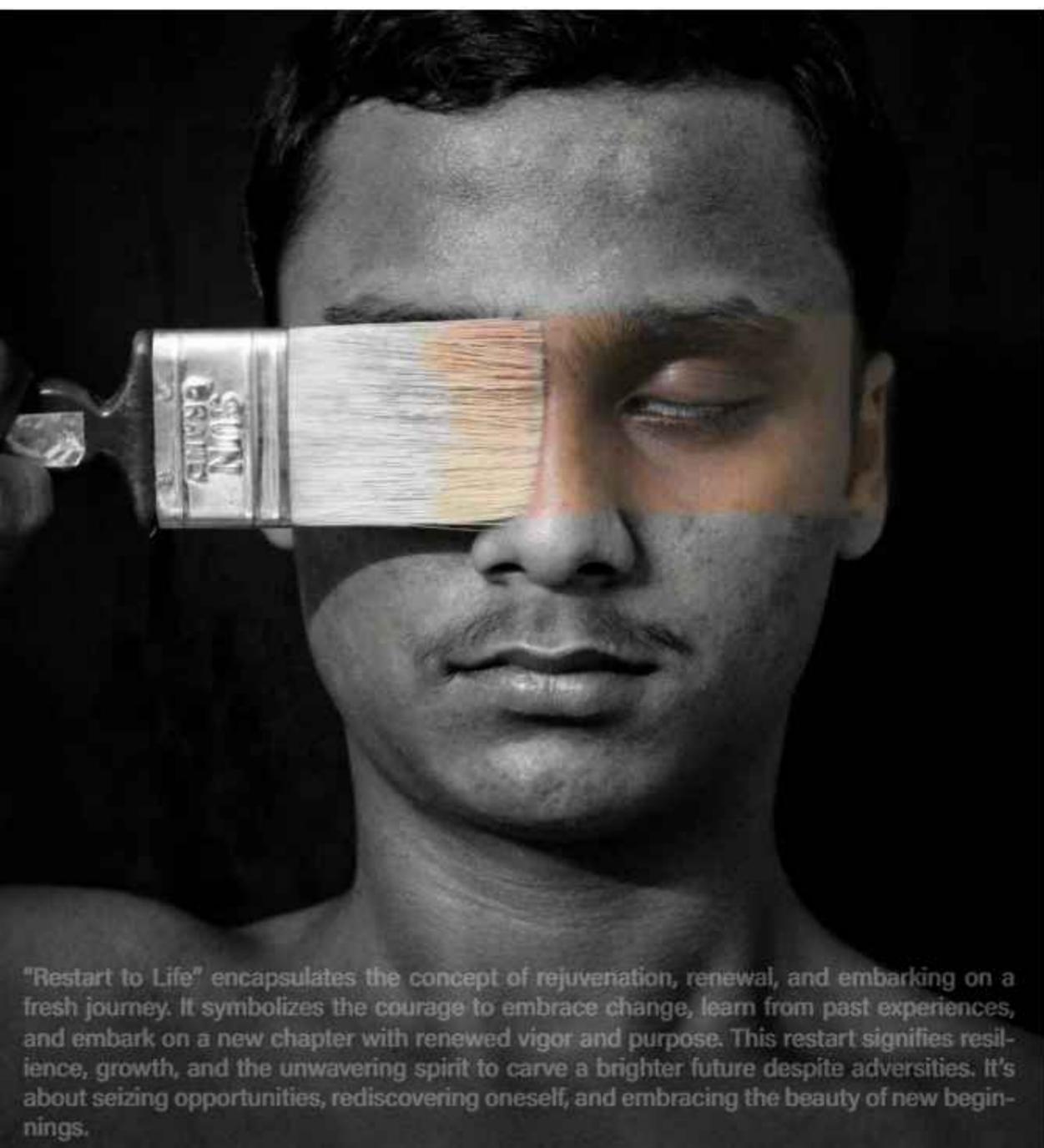
Racism is a systemic ideology rooted in prejudice and discrimination against individuals or groups based on their perceived race or ethnicity. It manifests in various forms, including overt acts of hatred, implicit biases, institutionalized discrimination, and systemic inequalities. Racism perpetuates harmful stereotypes, marginalizes certain communities, and undermines social cohesion and equality. It has deep historical roots and continues to impact individuals and societies worldwide, perpetuating cycles of injustice and inequality. Addressing racism requires collective efforts to challenge discriminatory beliefs, dismantle systemic barriers, promote diversity, equity, and inclusion, and foster understanding and empathy among all people.

**T**he fear of death, known as thanatophobia, is a deeply rooted and common human experience characterized by anxiety or apprehension surrounding one's own mortality or the death of loved ones. It stems from the uncertainty and finality of death, as well as the existential questions it raises about the meaning of life and what lies beyond. This fear can manifest in various ways, influencing beliefs, behaviors, and emotional responses, often prompting individuals to seek comfort, understanding, or ways to cope with the inevitability of death.





The need for happiness is fundamental to human well-being and flourishing. Happiness serves as a cornerstone of a fulfilling life, influencing various aspects such as mental and physical health, relationships, productivity, and overall life satisfaction.



A death stare is an intense, menacing glare or look given by someone, often conveying anger, hostility, or deep contempt. It's a non-verbal form of communication that can be used to intimidate or assert dominance over others. The term "death stare" suggests a gaze so intense that it feels like it could cause harm or even death metaphorically, though it typically only serves to unsettle or intimidate its recipient.

"Restart to Life" encapsulates the concept of rejuvenation, renewal, and embarking on a fresh journey. It symbolizes the courage to embrace change, learn from past experiences, and embark on a new chapter with renewed vigor and purpose. This restart signifies resilience, growth, and the unwavering spirit to carve a brighter future despite adversities. It's about seizing opportunities, rediscovering oneself, and embracing the beauty of new beginnings.

# NSS UNIT

## NATIONAL SERVICE SCHEME

When we come under the umbrella of a community from many angles, it becomes a society. An NSS unit is made up of 50 students who are committed to this community. Each NSS unit helps to transform many people who have the attitude to grow into great personalities. MIT's NSS 216 started its journey in 2014. Since the beginning of that journey, 50 students have been selected for the unit each year. The working time of an NSS unit is 120 hours. Students will be awarded final Year Certificate Activity Points only if they work for 120 hours. Our NSS unit has carried out many social activities under its auspices. Charitable activities are carried out regularly every year.



**Blood Donation camp conducted by NSS unit 216.**



**NSS volunteers gifting flower to the faculties as par of Teacher's day celebration**



Empowering young Indian from the panchayat to Parliament program conducted by NSS unit 216.



"ICE BREAK" orientation session for First year students. conducted by NSS unit 216.

Program Officer



Mr. Amal S  
Assistant Professor,  
ME

Assistant Program Officer



Mrs. Neeraja Chandrasekhar  
Assistant Professor,  
CE

# IEDC

## INNOVATION AND ENTREPRENEURSHIP DEVELOPMENT CENTRE

In today's rapidly evolving technological landscape, fostering innovation and entrepreneurship among students is paramount. At Mahaguru Institute of Technology, the Innovation and Entrepreneurship Development Cell (IEDC) stands as a beacon of support and guidance for budding innovators and entrepreneurs. MahaguruTech's IEDC is more than just a platform; it's a catalyst for students to transform their ideas into reality. Through a multifaceted approach, the IEDC empowers students to unleash their creative potential and embark on entrepreneurial ventures. One of the cornerstone initiatives of MahaguruTech's IEDC is its unwavering support for idea generation. By providing students with the necessary resources, mentorship, and encouragement, the IEDC cultivates a culture where innovation thrives. Workshops, seminars, and webinars are regularly organized to nurture students' creativity and equip them with the skills needed to turn their ideas into tangible solutions. An annual highlight of MahaguruTech's IEDC is the Hackathons, where students from diverse backgrounds come together to brainstorm, collaborate, and innovate. These events serve as incubators for groundbreaking ideas, fostering a spirit of competition and camaraderie among participants. Beyond ideation, MahaguruTech's IEDC extends support to students in realizing their entrepreneurial aspirations. From guiding them through the intricacies of business planning to facilitating connections with investors, the IEDC plays a pivotal role in nurturing the next generation of entrepreneurs. Central to MahaguruTech's IEDC ethos is its focus on socially and sustainably conscious engineering. By emphasizing themes such as social impact and sustainability, the IEDC encourages students to develop solutions that address pressing global challenges.

The objectives of MahaguruTech's IEDC are clear:

- \* To foster a new culture of idea generation,
- \* To provide unwavering support for entrepreneurship, and
- \* To empower students through mentorship and guidance.

By instilling a sense of confidence and resourcefulness in students, the IEDC paves the way for a future where innovation knows no bounds. In conclusion, Mahaguru Institute of Technology's IEDC is not just an institution; it's a hub of innovation, creativity, and entrepreneurship. Through its myriad initiatives and unwavering dedication, the IEDC continues to shape the future leaders of tomorrow, one idea at a time.



**IEDC summit 2023 at  
CET college Trivandrum.**



**Food fest conducted  
by IEDC.**





Orientation session for First Year's conducted by IEDC.



Online HACKATHON program conducted by IEDC.



Nodal Officer



Mr. Anub A Nair  
Assistant Professor  
CSE

Nodal Officer



Mrs. Sreethi Gangadharan  
Assistant Professor  
S&H

# FACULTY WELFARE COMMITTEE

The Faculty Welfare Committee stands as a pillar of support, dedicated to nurturing the well-being and professional development of our faculty members. With a vision centered on creating a supportive, inclusive, and empathetic teaching environment. The committee aims to promote constructive connections between teachers and students, with the ultimate goal of nurturing an environment where development and outstanding performance thrive.

The Faculty Welfare Committee serves as a vital resource and support system for our faculty members, empowering them to thrive professionally and personally. Through collaborative efforts and a commitment to excellence, the committee endeavors to uphold the well-being and success of our esteemed faculty community.

The Faculty Welfare Committee undertakes several key functions to ensure the well-being and professional growth of faculty members:

- Addressing and resolving any complaints or concerns raised by faculty members in a timely and effective manner.
- Monitoring the utilization of medical and financial resources by faculty members, ensuring equitable access and support.
- Leading orientation programs for new faculty members, facilitating their integration into the academic community.
- The committee pays close attention to the needs and concerns of faculty members, ensuring that necessary steps are taken to support their growth and development.





- Conducting regular meetings to discuss and address the welfare of faculty members, fostering a collaborative and supportive environment.
- Organizing a variety of extracurricular activities to support faculty interests and enhance their personal and professional growth.



CONVENOR



Prof. Mathu Uthaman  
A.P.CSE

CLUBS  
OF MIT

# Women's Cell

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Mahaguru Institute of Technology recognizes the vital role of women's cells in creating opportunities and environs to facilitate women to reach the peak of their naturally endowed potential thereby enriching organizational and social life.

Aiming to help maintain a harmonious atmosphere in the Mahaguru Institute of Technology, a Women's cell is established and actively functioning to enable women to pursue their work with dignity and reassurance. The cell has been initiated with the primary objective of creating an effective organizational structure for improving the status of women in the institution.



CONVENOR



Prof. Arathi Babu  
A, PECE

CLUBS  
OF MIT

# Anti-Ragging Cell

Mahaguru Institute of Technology (MIT) aims to root out ragging in all its forms from the institution by prohibiting it by law, preventing its occurrence, and punishing those who indulge in ragging as provided for in the government regulations and the appropriate law in force. The institution has constituted an Anti-ragging Cell as per AICTE regulations to prevent the menace of ragging. The policies on Anti-ragging of MIT are in accordance with the policies and procedures laid down by various authorities from time to time.

The anti-Ragging Committee is the Supervisory and Advisory Committee in preserving a Culture of a Ragging Free Environment in the college Campus. The anti-Ragging Committee is involved in designing strategies and action plans for curbing the Menace of Ragging in the college by adopting an array of activities.

**Objectives of ARC:** Ragging is a humiliating social crime.

The foremost objectives of ARC are,

- To prevent and protect the student community from being ragged or indulging in the act of ragging.
- To bring awareness among the students about the ill effects of ragging, its impact on human life, and the consequences of involvement in the act of ragging.
- To receive complaints and resolve them through the ARC.
- To initiate legal actions when required considering the intensity of ragging instances.



CONVENOR

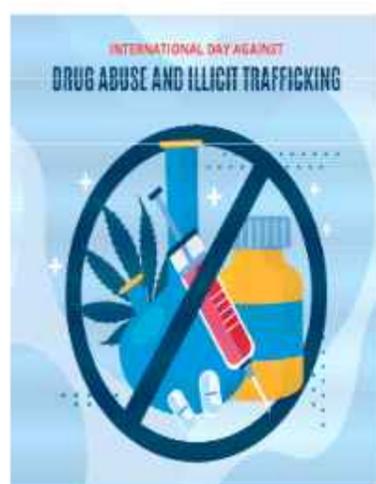


Prof.Sivan S Kumar  
A.P,ME

# ANTI-NARCOTICS CELL

The Anti-Narcotics Cell at our college is a dedicated initiative to promote a safe and drug-free environment within our campus premises. Committed to fostering a culture of awareness, prevention, and intervention. The Anti-Narcotics Cell plays a pivotal role in safeguarding the well-being and academic pursuits of our students. Led by a team of experienced faculty members, counselors, and student volunteers, the Anti-Narcotics Cell operates with a multi-faceted approach. The cell organizes regular workshops, seminars, and awareness campaigns to educate students about the dangers of substance abuse and addiction. These sessions focus on the physiological, psychological, and social repercussions of drug abuse, empowering students to make informed choices.

Recognizing that substance abuse can often stem from underlying issues, the Anti-Narcotics Cell provides confidential counselling services for students struggling with addiction or related problems. Trained counsellors offer personalized support, guidance, and referrals to external resources if necessary. To encourage reporting of drug-related incidents or concerns, the Anti-Narcotics Cell maintains an anonymous reporting mechanism. Students can submit tips or information regarding suspicious activities or individuals, ensuring a proactive approach to tackling substance abuse on campus. The cell collaborates with law enforcement agencies, rehabilitation centres, and community organizations to address drug-related issues comprehensively.





By fostering partnerships with external stakeholders, the Anti-Narcotics Cell enhances its capacity to tackle drug trafficking, distribution, and addiction effectively. Recognizing the influence of peer networks, the Anti-Narcotics Cell empowers students to become advocates for drug prevention within their own social circles. Peer-led initiatives, such as peer counselling sessions and peer-to-peer education campaigns, create a supportive environment for students to discuss concerns and seek help.

The Anti-Narcotics Cell works closely with the college administration to develop and enforce strict policies against drug possession, distribution, and use on campus. Through proactive enforcement measures and disciplinary actions, the cell maintains a zero-tolerance stance towards drug-related offenses. In essence, the Anti-Narcotics Cell serves as a proactive force in promoting a healthy and drug-free campus environment. By fostering awareness, providing support services, and collaborating with stakeholders, the cell endeavors to safeguard the well-being and academic success of every student in our college community. Together, we strive to build a campus culture where substance abuse has no place, empowering students to realize their full potential.

#### CONVENOR



Prof. Yadhu Krishnan  
A.P.ME

CLUBS  
OF MIT

# Film and Photography Club

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The Film and Photography Club organizes regular screenings of artistic cinema, documentaries and photo exhibitions. The forum provides the students an opportunity to watch, discuss, and review films and photography. The club also conducts workshops in photography and filmmaking.

Moreover, it is a fantastic launch pad for student aspirants in the field, exposing them to liberal arts and critical thinking. The Film and Photography Club in Mahaguru Tech is a base platform for students to become professionals in their careers. Irrespective of their core subject, this club encourages picking up the snapshots of their interest in the best way. The club always tries to bring out Photography talents from our college and applaud their best output.



CONVENOR



Prof. Amjith S  
A.P.E.E.E

CLUBS  
OF MIT

# GRIEVANCE CELL

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As per the ordinance from Kerala Technological University (KTU), a Student Grievance Redressal Cell has been reconstituted in this institution on 08/04/21. Students can approach this cell to express his/her grievance. The cell considers the request and addresses genuine complaints from students. The Grievance Redressal Cell is constituted to address student grievances. The Cell attempts to address genuine problems and complaints of students, regardless of the nature of the problem.

The objective of the Grievance Cell is to develop a responsive and accountable attitude among all the stakeholders to maintain a harmonious educational atmosphere in the institute. All the proceedings of the Grievance mechanism will be suitably documented. Complaints can be given through the mail id: [grievance\\_cell@mahagurutech.ac.in](mailto:grievance_cell@mahagurutech.ac.in).



CONVENOR



Prof.Lijimole S  
A.P,S&H

# ARTS CLUB

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The Arts Club at Mahaguru Institute of Technology offers students a platform to unleash their creativity and encourages them to view the world from unique perspectives. The college prioritizes cultural activities alongside academic pursuits to ensure students' comprehensive growth. Within the club, students engage in mutual learning, sharing their skills across various art forms. It specifically supports students with talents in music, dance, and other fine arts. Moreover, students are motivated to take part in inter-collegiate and other competitions within the realm of fine arts.



CONVENOR



Prof. Ambilimol V. P.  
A.P. S&H

CLUBS  
OF MIT

# DANCE CLUB

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The Dance club's primary goal is to cultivate exceptional dancers within our college community. It focuses on honing students' abilities in both Western and Eastern styles. Members of the club enthusiastically showcase their talents on various occasions. They hold regular meetings and practices, aiming to refine their skills and achieve mastery in their art form. Hosting introductory meetings and workshop to attract dance enthusiasts. Organizing regular dance practices, workshops, and social events for club members. The Dance club encompasses a range of styles and musical genres, from electronic dance music in salsa, hip-hop, or ballroom dancing. They offer a lively and vibrant atmosphere where people gather to dance with friends, socialize, and connect with others.



CONVENOR



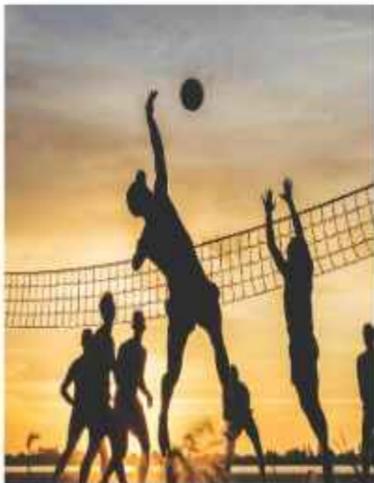
Prof. Amjith S  
A.P.E.E.E

# Sports Club

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At the heart of our sports club's ethos lies a steadfast commitment to nurturing not only athletic prowess but also character development and community engagement. Guided by the principles of teamwork, integrity, and perseverance, the club empowers its members to strive for greatness both on and off the field.

Our sports club boasts world-class facilities meticulously tailored to cater to the diverse needs of its athletes. From cutting-edge training equipment to expert coaching staff, every aspect of the club's infrastructure is geared towards unlocking the full potential of its members and fostering a culture of continuous growth and improvement.



CONVENOR



Mr. Akhil S  
S&H

CLUBS  
OF MIT

# NDLI



## NDLI Club

### MOTTO

Open, Inclusive

The National Digital Library of India (NDLI) is a virtual repository of learning resources that is not just a repository with search/browse facilities but provides a host of services for the learner community. It is sponsored and mentored by the Ministry of Education, Government of India, through its National Mission on Education through Information and Communication Technology (NMEICT).

Filtered and federated searching is employed to facilitate focused searching so that the learners can find the right resource with the least effort in minimum time. NDLI provides user group-specific services such as Examination Preparatory for school and college students and job aspirants. Services for researchers and general learners are also provided. NDLI is designed to hold content of any language and provides interface support for the 10 most widely used Indian languages.

It is built to provide support for all academic levels including researchers and life-long learners, all disciplines, all popular forms of access devices, and differently-abled learners. It is designed to enable people to learn and prepare from best practices from all over the world and to facilitate researchers to perform interlinked exploration from multiple resources. It is developed, operated, and maintained by IIT Kharagpur.

The NDLI club team has approved a request from the Mahaguru Institute of Technology to set up an NDLI Club in Mahagurutech. All interested students, faculty members, and employees of Mahagurutech can now enroll themselves as the members of NDLI Club of Mahaguru Tech.



### CONVENOR



Prof. Amjith S  
A.P.EEE

# STUDENT WELFARE COMMITTEE

In Mahaguru Institute of Technology, the Student Welfare Committee envisions a supportive, student-centered learning environment and empathetic relationships between educators and learners. By attending to their needs, offering counseling to sluggish learners, and cultivating positive psycho-personal motivation and guidance, the Committee focuses on the holistic development of the students.

- Paying attention to the issues that students face and comprehending what steps are necessary for their growth in any way.
  - Helping the students with their educational journey, which encompasses both academic and hands-on learning.
  - Holding regular meetings to discuss the welfare of the students. A variety of extracurricular activities that support students' interests are planned to help them develop as individuals.
  - Developing students into actual entrepreneurs and equipping them with the skills necessary to organize events at the college and intercollegiate levels.
- Functions
- Resolve student complaints.
  - Keep an eye on the medical and financial resources that students use.
  - Lead new student orientation programs.
  - Manage dropout-related concerns and make a space conducive to social, spiritual, and emotional development.



CONVENOR



Prof. Sreeti Gangadharan  
A.P.S&H

# CLUBS OF MIT

# Institution's Innovation Council(ICC)

Innovation lies at the heart of progress, and at Mahaguru Institute of Technology, the establishment of the Institute Innovation Council (IIC) stands as a testament to the institution's commitment to fostering a culture of innovation and entrepreneurship. Through a series of dynamic initiatives, the IIC has become a driving force in enhancing the institution's pride through innovation. One of the key objectives of the IIC is to nurture an environment where creativity thrives. To achieve this, the council has organized numerous brainstorming sessions, workshops, hands-on activities, and industrial visits across the country. These initiatives not only expose students to real-world challenges but also provide them with the tools and resources to develop innovative solutions.

Central to the mission of the IIC is its focus on instilling an innovative mindset among students. By encouraging out-of-the-box thinking and experimentation, the council aims to empower students to become catalysts for change. Through collaborative projects and interdisciplinary collaborations, students are encouraged to explore new ideas and perspectives, laying the foundation for their entrepreneurial journey. The impact of the IIC extends far beyond the walls of the institution. By fostering a culture of innovation, the council not only empowers students to pursue their entrepreneurial aspirations but also contributes to broader societal and economic development. Students graduating from Mahaguru Institute of Technology are not just equipped with technical skills but also possess the creativity, resilience, and entrepreneurial spirit to drive meaningful change.

Furthermore, the IIC serves as a platform for collaboration and knowledge exchange between students, faculty members, industry experts, and policymakers. By facilitating meaningful interactions and partnerships, the council creates opportunities for students to gain real-world insights and mentorship, further enriching their learning experience. The establishment of the Institute Innovation Council at Mahaguru Institute of Technology marks a significant milestone in the institution's journey towards excellence. By nurturing a culture of innovation and entrepreneurship, the IIC not only enhances the institution's pride but also empowers students to become agents of innovation and positive change in the world. Through its multifaceted initiatives and unwavering commitment, the IIC continues to inspire and empower the next generation of innovators and entrepreneurs, driving progress and prosperity for generations to come. (IIC) stands as a testament to the institution's commitment to fostering a culture of innovation and entrepreneurship. Through a series of dynamic initiatives, the IIC has become a driving force in enhancing the institution's pride through innovation. One of the key objectives of the IIC is to nurture an environment where creativity thrives.



**INSTITUTION'S  
INNOVATION  
COUNCIL**  
(Ministry of HRD Initiative)

CONVENOR



Prof. Anub A  
A.P./ML

# ECO CLUB

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In a world where environmental consciousness is paramount, MIT's Eco Club stands as a beacon of sustainable practices and community engagement. With a mission to foster environmental stewardship and promote eco-friendly initiatives, the club has become a driving force for positive change within the college campus and beyond.

Founded on the principles of conservation, education, and action. The Eco Club at MIT strives to raise awareness about pressing environmental issues and inspire practical solutions. Through a variety of activities, events, and projects, members of the club actively contribute to creating a more sustainable and environmentally conscious community.

Looking ahead, MIT's Eco Club remains committed to its vision of a greener, more sustainable future. Through continued advocacy, education, and hands-on initiatives, the club aims to inspire lasting change and empower individuals to become stewards of the environment, both within the college community and the world at large. Join us in our journey towards a brighter, greener tomorrow.



CONVENOR



Prof. R. Renju  
A.P., S&H



# FUNZONE REVIEWS



Be ready for new various missions and explore the San-Andreas.



Compete with others in GTAV online and become richest in San Andreas.



Unlock special vehicles and guns and become the boss.

Grand Theft Auto V is an action-adventure game. played from either a third-person or first-person perspective. Players complete missions—linear scenarios with set objectives—to progress through the story. Outside of the missions, players may freely roam the open world. Composed of the San Andreas open countryside area, and its fictional Blaine County and city of Los Santos, the world is much larger in area than earlier entries in the series. It may be fully explored after the game's beginning without restriction, although story progress unlocks more gameplay content.

Each character has a set of eight skills that represent their ability in specific areas such as shooting and driving. Though skills improve through play, each character has a skill with expertise by default (e.g. Trevor's flying skill). The eighth "special" skill determines proficiency in an ability that is unique to each respective character. Michael enters bullet time in combat, Franklin slows down time while driving, and Trevor deals twice as much damage to enemies while taking half as much in combat. A meter on each character's HUD depletes when an ability is being used and regenerates when players perform skilful actions (for example, drifting in vehicles as Franklin or performing headshots as Michael).

The game world is navigated on foot and by vehicle, from either a third-person or first-person perspective. Players control the protagonists throughout single-player and switch among them, both during and outside missions. The story is centred on the heist sequences, and many missions involve shooting and driving gameplay. A "wanted" system governs the aggression of law enforcement response to players who commit crimes. In Grand Theft Auto Online, the game's online multiplayer mode, up to 30 players engage in a variety of different cooperative and competitive game modes.

In the single-player mode, players control three characters: Michael De Santa, Trevor Philips and Franklin Clinton—criminals whose stories interconnect as they complete missions. Some missions are completed with only one character and others feature two or three. Outside the missions, players may switch between characters at will by a directional compass on the HUD, although this feature is restricted at certain points during the story. During missions, characters may automatically switch to complete specific objectives. A character's compass avatar will flash red if he is in danger and needs help, and flash white if he has a strategic

## Game | info

- GTA V
- Developer ROCKSTAR NORTH
- Publisher ROCKSTAR PUBLISHERS
- Released 17 Sep, 2017

- Requires a 64-bit processor and operating system
- OS: Windows 10
- Processor: Intel Core 2 Quad CPU Q6600 @ 2.40GHz (4 CPUs) / AMD Phenom 9850 Quad-Core Processor (4 CPUs) @ 2.5GHz.
- Memory: 4GB RAM
- Graphics: NVIDIA GTX 660 2GB / AMD HD7870 2GB
- DirectX: Version 10

# GTA V



advantage. Though players complete missions with the protagonists, the more difficult heist missions require aid from AI-controlled accomplices with unique skill sets like computer hacking and driving. If an accomplice survives a successful heist, they take a cut from the cash reward and may be available for later missions with improvements to their unique skills. Some heists afford multiple strategies; in a hold-up mission, players may either stealthily subdue civilians with an incapacitating agent or conspicuously storm the venue with guns drawn.





Marvel's Spider-Man 2 is a 2023 action-adventure game developed by Insomniac Games and published by Sony Interactive Entertainment. It is based on the Marvel Comics character Spider-Man, and features a narrative inspired by its long-running comic book mythology which is also derived from various adaptations in other media. It is the third entry in the Marvel's Spider-Man series, acting as a sequel to Marvel's Spider-Man (2018) and a follow-up to Marvel's

Spider-Man: Miles Morales (2020). In this installment, Peter Parker and Miles Morales struggle to navigate the next steps in their personal lives while combating several new threats, including a private militia led by Kraven the Hunter, who transforms New York City into a hunting ground for super-powered individuals; and the extraterrestrial Venom symbiote, which bonds itself to Parker and negatively influences him, threatening to destroy his personal relationships.

Marvel's Spider-Man 2 is an action-adventure single-player video game played from a third-person perspective. As with the first game, Peter Parker and Miles Morales are the two main characters, with Mary Jane and Venom playable in certain missions, becoming individually playable in accordance with the story as they traverse an open world New York City and fight enemies. Players can acquire new abilities and collect various Spider-Man suits. Peter and Miles can be freely swapped between at any point during free-roam in the game's open world, and have dedicated missions both in the main story and as part of side content that takes advantage of their individual traits. The game expands upon the prior entries' open world, allowing players to explore Brooklyn and Queens in addition to Manhattan, which was the main setting of the previous two games.

Peter starts his first day as a physics teacher at Brooklyn Visions Academy with Miles among his students, but they are interrupted by a rampaging Sandman, requiring both Spider-Men to subdue him. Fired for abandoning the class, Peter returns to his Aunt May's home in Queens—which he has moved into following her death[a]—to meet with Mary Jane. They are surprised by Harry, who has miraculously recovered from his terminal illness. Harry hires Peter to work at his environmental technology startup, the Emily-May Foundation (EMF), so they can pursue his dream of "healing the world". Concurrently, Kraven and his Hunters secretly infiltrate New York.



#### GAME INFO

Developer: Insomniac Games  
Publisher: Sony Interactive Entertainment  
Release: 20 Oct, 2023

#### PC REQUIREMENTS

- OS: Windows 10 64-bit
- Processor: Intel Core i5 8400 / AMD Ryzen 5 3600
- Memory: 12GB Ram
- Graphics: Nvidia GeForce 1070 / AMD Radeon RX Vega 56
- DirectX: Version 12
- Storage: 90 GB





Spider-Man's secret identity is Peter Benjamin Parker. Initially, Peter was depicted as a teenage high-school student and an orphan raised by his Aunt May and Uncle Ben in New York City after his parents Richard and Mary Parker died in a plane crash. Lee and Ditko had the character deal with the struggles of adolescence and financial issues and gave him many supporting characters, such as Flash Thompson, J. Jonah Jameson, and Harry Osborn; romantic interests Gwen Stacy, Mary Jane Watson, and the Black Cat; and enemies such as the Green Goblin, Doctor Octopus, and Venom.



Miles Morales is the second Spider-Man to appear in Ultimate Marvel, an imprint with a separate continuity from the mainstream Marvel Universe called the Ultimate Universe (Earth-1610), first appearing in Ultimate Fallout #4 (August 2011), following the death of the Ultimate Peter Parker. Bitten by a genetically engineered spider known as specimen 42, which is slightly different from the one that granted Peter Parker superhuman powers, Miles Morales possesses abilities similar to the original Spider-Man's, including enhanced strength, agility, and reflexes, the ability to adhere to walls and ceilings with his hands and feet (even through clothing), and a "spider sense" that warns him of danger with a buzzing sensation in his head. Though his strength and agility are similar to those of the original younger Spider-Man, his spider-sense is not as strong, as it only warns him of immediate danger.



Marvel's Spider-Man 2 was released for the PlayStation 5 on October 20, 2023. The game sold over 2.5 million units in 24 hours and over five million in 11 days, becoming PlayStation's fastest selling first-party title. It is among the best-selling PlayStation 5 games, with ten million units sold as of February 2024. The game received critical acclaim, with praise directed towards its narrative and characterization, as well as its improvements to gameplay over its predecessors. It was nominated for numerous end-of-year accolades, and won in six categories at the D.I.C.E. Awards, including Action Game of the Year, Technical Achievement, Audio Design, Best Character, Achievement in Animation and Original Music Composition.



# SPORTS



# MIT

CRICKET

**MIT STAFF CRICKET TEAM**

**MIT DROPBALL TEAM**



**RUNNER UP OF FISAT CUP 2024 HELD AT FISAT CRICKET GROUND ANGAMALY, FACULTY TEAM**



**DROPBALL TEAM PARTICIPATED IN A MATCH HELD AT VIDYARAMBHAM SCHOOL SASTHAMKOTTA**

**MIT WOMEN KABADDI TEAM**



**WOMENS KABADDI TEAM OF MIT PLAYED REPRESENTING ALAPPUZHA DISTRICT**

MIT SPORTS

# TEAM MIT ON THE FLOOR

## FOOTBALL



MIT MENS FOOTBALL TEAM

MIT WOMENS KABADDI TEAM

MIT VOLLEYBALL TEAM



INTERCOLLEGE UNIVERSITY KABADDI MATCH "CZONE" HELD AT MIT



VOLLEYBALL MATCH HELD AT MIT



# MIT SPORTS

# TOPPER'S LIST



MS. ARYA S KUMAR  
S8 CSE



MR. ALAAP S NAIR  
S8 EEE



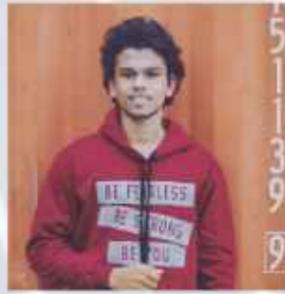
MR. MIDHUN M  
S8 ECE



MR. ASWIN R K  
S8 ME



MR. KASINADHAN A  
S8 CE



MR. ABHISHEK  
S6 AI



MS. M K AMALU  
S6 EEE



MS. HISANA F  
S6 CE



MS. ABHINAYA A  
S6 ECE



MR. HARINATH  
S6 ME



MS. G R LESHMIPRIYA  
S6 CSE



MR. DEVADEVAN K S  
S4 EEE



MR. DEEPU D  
S4 ME



MS. UTHARA UDAYAN  
S4 CSE



MR. RINO M JOY  
S4 AI&ML



MS. SRAVYA D S  
S4 CE



MR. ADITH K K  
S4 ECE

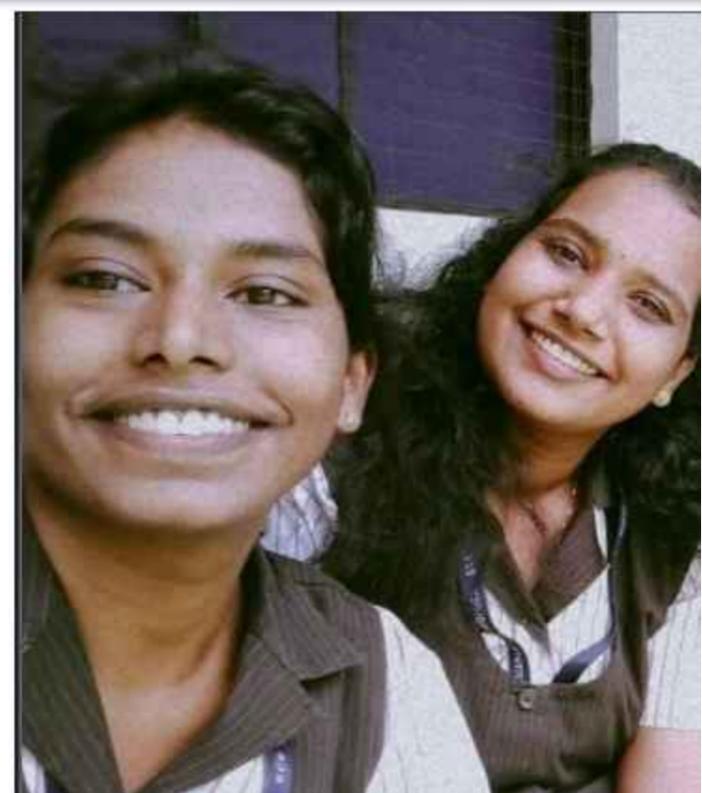


# Discipline, Dedication and Determination





OF R  
**PHINON**





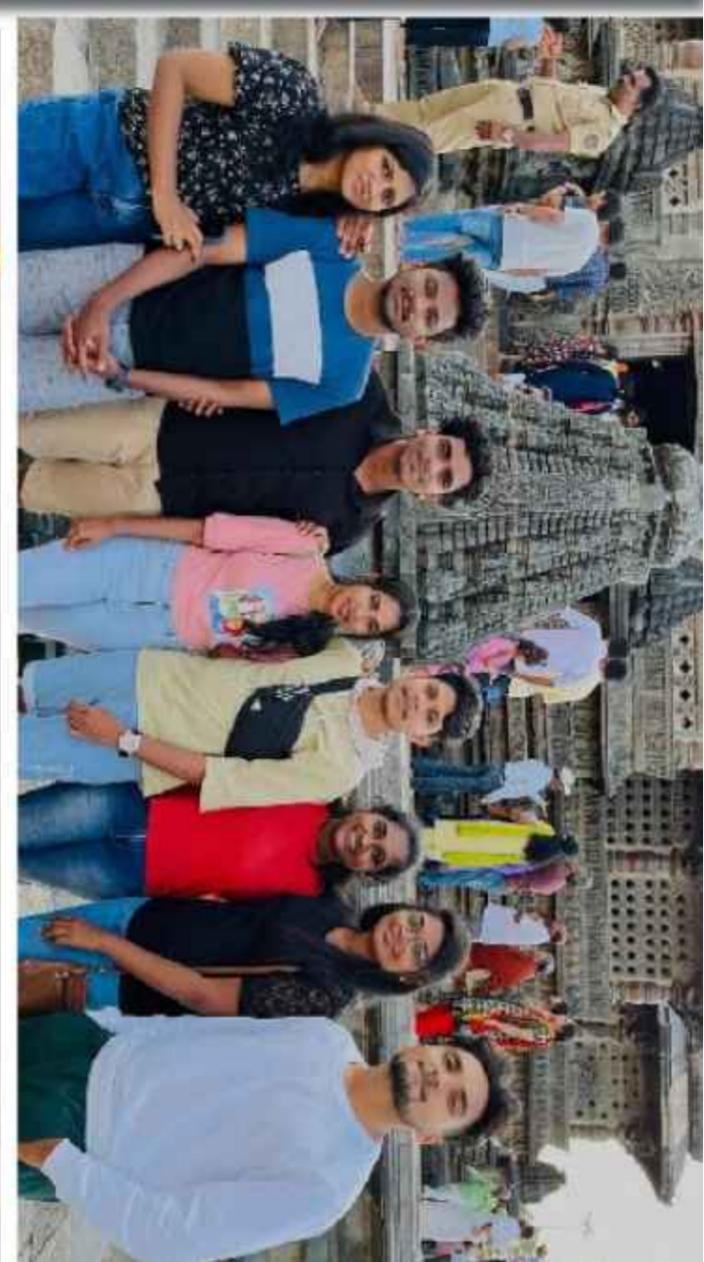
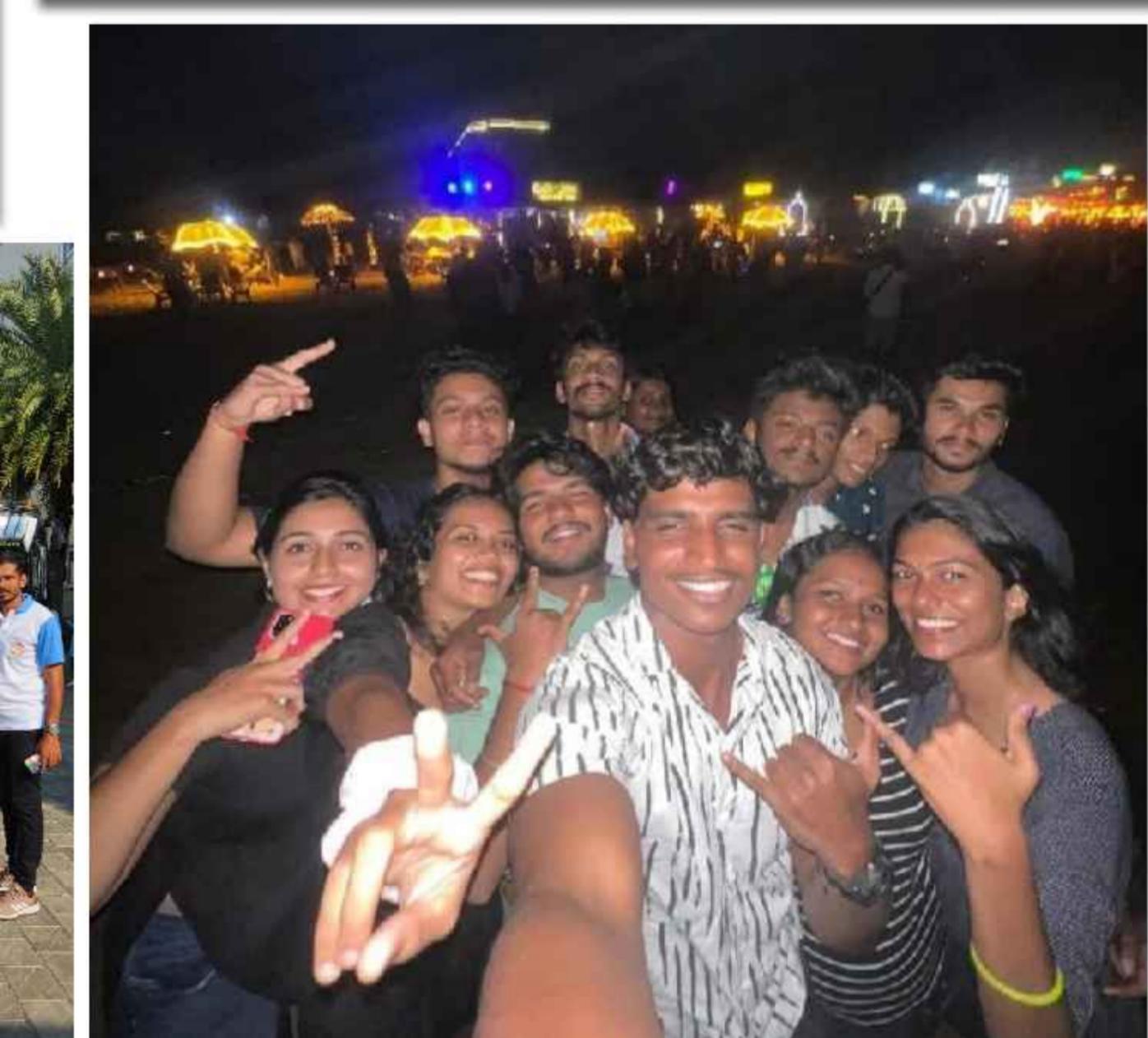
# Memories

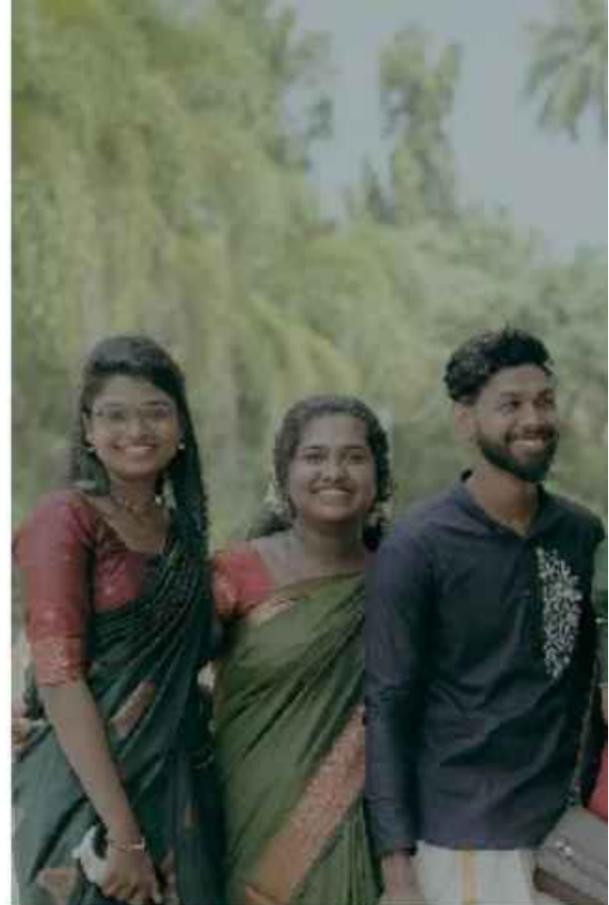
























Thank  
you



# MAHASYA



**MAHAGURU INSTITUTE OF TECHNOLOGY**

Kattachira, Pallickal PO, Kayamkulam, Kerala 690503

[www.mahagurutech.ac.in](http://www.mahagurutech.ac.in)