



# E-TROLTRONICS

EIE NEWSLETTER

EDITION JAN 23 TO APR 23



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#### VISION OF THE INSTITUTE

The vision of the college is to become a technical university of International Standards through continuous improvement.

#### MISSION OF THE INSTITUTE

Kumaraguru College of Technology (KCT) is committed to providing quality Education and Training in Engineering and Technology to prepare students for life and work equipping them to contribute to the technological, economic, and social development of India. The College pursues excellence in providing training to develop a sense of professional responsibility, social and cultural awareness and set students on the path to leadership.

#### VISION OF THE DEPARTMENT

The Department of Electronics & Instrumentation Engineering (E&I) envisions a holistic education that transforms the learners into responsible engineers which shall enable them to identify significant problems both in industry and society to arrive at creative and sustainable solutions through collaborative team efforts.

#### MISSION OF THE DEPARTMENT

The Department of Electronics & Instrumentation Engineering (E&I) aims to

- Implement modern andragogical approach in academics, innovative research initiatives and collaborative projects that shall ethically address the societal needs.
- Develop knowledge and skills required to excel in manufacturing, automation, and allied industries on a global platform.
- Expand the knowledge for higher studies and get inspired for lifelong learning.

**Dr. DINESH KUMAR V****Asst Prof & Head**

## HOD's DESK:

Electronics & Instrumentation Engineering established in the year 2006 is a specialized branch of Electrical and Electronic Engineering, which focuses on the principle and operation of field instruments SCADA, DCS, PLC'S and process control systems which are used in design and configuration of automated systems. These engineers work in industries with automated processes, such as chemical

or manufacturing plants, with the goal of improving system productivity, reliability, safety, optimization, and stability. Within a short period, we have established all our laboratories and centres of excellence, which are required for the curriculum and several specialized equipment and software, which help the students to do their real time projects. We have placed our students in core industries like Yokogawa, Bosch, Data Patterns, TVS, Tsolve, Saipem, ECON, etc. Many of our alumni have successfully cracked CAT and GATE to gain entrance into the high portals of higher education. Also, we have our students pursuing their higher studies in US, UK, Germany, and Australia.

## PROGRAM EDUCATIONAL OBJECTIVES

Graduates of B.E (Electronics & Instrumentation Engineering) will

PEO-1	Excel in technical and professional career with core competence in automation
PEO-2	Possess the passion for professional development by continuous learning in allied Engineering and Management fields.
PEO-3	Engage in resolving industrial and social issues using contemporary tools
PEO-4	Exhibit professionalism and ethical attitude towards resolving automation issues to society at large.





## PROGRAMME OUTCOMES

Graduates of B.E (Electronics & Instrumentation Engineering) will be able to:

PO 1	Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
PO 2	Identify, formulate, research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
PO 3	Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
PO 4	Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
PO 5	Create, select, and apply appropriate techniques, resources and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
PO 6	Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice
PO 7	Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
PO 8	Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
PO 9	Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.



PO 10	Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
PO 11	Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
PO 12	Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

### PROGRAMME SPECIFIC OUTCOMES

Graduates of B.E (Electronics and Instrumentation Engineering) will be able to:

PSO 1	Develop, analyse, and calibrate Instruments and electronic systems for various real-world applications adhering to ISA ethical codes.
PSO 2	Integrate programmable logic controllers (PLC), distributed control systems (DCS) for manufacturing and processing systems and gain proficiency in relevant software tools.





## ABOUT THE DEPARTMENT

Started in the year 2006, the Department of Electronics & Instrumentation Engineering is running a 4-year undergraduate programme in Electronics & Instrumentation Engineering. Since its inception, the Department has grown in leaps and bounds with the state of art infrastructure. Yokogawa Centre of Excellence, KCT-FLUKE Centre of Excellence in Calibration, Siemens PLC Automation Laboratory are some of the major centres operational in addition to Advanced Process Control and Computerised Sensors laboratories. The Department has a team of well qualified, dedicated Faculty members with vast experience in industrial and research background. The Department is involved in active Industrial consultancy services for neighbouring Industries in the field of Automation. Certified Calibration for Electro-Technical/Thermal/Pressure Instruments are some of the prominent consultancy services. Major and minor projects funded by government bodies and Industries are focused on solving industrial needs. Our association with the Professional bodies ISA, ISOI, IEEE, ISTE, IEI and CSI is playing a significant role in enriching the quality of curriculum.







## DEPARTMENT ACTIVITIES

### PONGAL CELEBRATION:

In this year 2023, the Department Association members of 3<sup>rd</sup> year and 4<sup>th</sup> year participated in the yearly Tamil Mandram Event “Namma Pongal” and cooked their delicious Pongal. Apart from the event, the members enjoyed it as a beautiful moment and a chance to be unity and celebrated the Pongal festival in a very good and enjoyed. This event was conducted on 11 Jan 2023 behind the civil block. The final year students celebrated this as their wonderful moment in the campus since it was their last academic year.







## PLAY WITH WORDS

This event was conducted by the Department Association of EIE behalf 74<sup>th</sup> Republic Day of India. This event consists of quiz, puzzles. The participants as individual team participation was asked to solve the given puzzle and based on the scores the winner and runner were announced. The EIE (Electronics and Instrumentation Engineering) department of KCT (Kumaraguru College of Technology) in collaboration with Scrabble Kumaraguru conducted an event called "Play with Words" in celebration of the 74th Republic Day of India. This event aimed to showcase the creative and linguistic talents of the participants. Through various engaging activities and competitions, participants were encouraged to explore the power of words, language, and expression. The event likely included activities such as word games, debates, poetry recitations, and storytelling, all designed to promote effective communication and celebrate the cultural richness of the Indian Republic. Participants had the opportunity to solve puzzle and much more interesting quiz, fostering a sense of unity and appreciation for the diverse linguistic heritage of the nation. "Play with Words" was likely a platform for students to engage in friendly competition, improve their public speaking and communication skills, and celebrate the essence of Indian democracy and unity through language. By organizing this event on the 74th Republic Day, the EIE department of KCT aimed to inspire and encourage participants to harness the power of words for personal and societal growth.







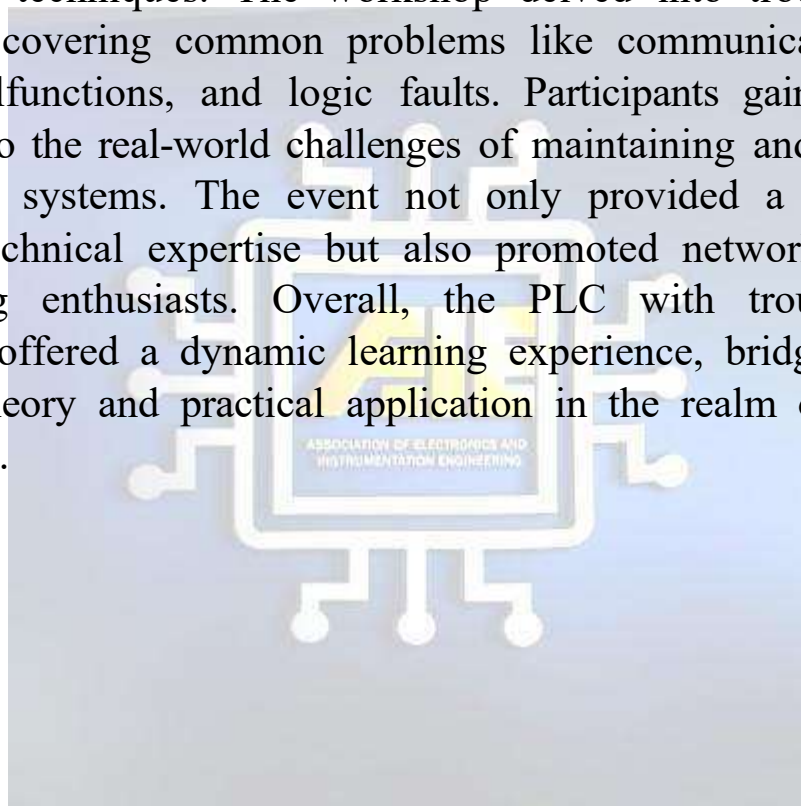
## LEGO-BRICKS

The EIE (Electronics and Instrumentation Engineering) department of KCT (Kumaraguru College of Technology) organized an event called "LEGO Bricks" as part of the Yugam Culturals festival 3<sup>rd</sup> March 2023. In this event, participants were provided with LEGO bricks and sensors to create prototypes that incorporated both physical construction and electronic sensing technology. The event revolved around the creative integration of LEGO bricks and sensors, where participants were tasked with designing and building functional prototypes that demonstrated the synergy between engineering and creativity. By utilizing sensors alongside LEGO bricks, participants had the opportunity to explore the practical application of sensor technology in various scenarios. Participants likely engaged in hands-on activities, using their technical skills to assemble and connect LEGO pieces with sensors in innovative ways. This exercise allowed them to gain insights into how sensors can enhance the functionality and interactivity of everyday objects. The event fostered collaborative learning, problem-solving, and experimentation as participants brainstormed, designed, and constructed their prototypes. Overall, "LEGO Bricks" provided a dynamic platform within the context of the Yugam Culturals festival for participants to merge engineering concepts with creativity. By combining LEGO building and sensor technology, the event aimed to inspire participants to think critically about the potential of technology in enhancing the physical world and to showcase their innovative ideas through tangible prototypes.



## PLC WITH TROUBLESHOOTING

The Electrical and Instrumentation Engineering (EIE) department of Kumaraguru College of Technology (KCT) organized an insightful workshop on Programmable Logic Controllers (PLC) with a focus on troubleshooting, as a part of their Yugam workshop series 1<sup>st</sup> March 2023. The workshop aimed to equip participants with practical skills in handling PLCs and efficiently diagnosing and resolving issues that arise in industrial automation systems. Through hands-on sessions, participants learned about PLC programming, ladder logic, and interfacing techniques. The workshop delved into troubleshooting strategies, covering common problems like communication errors, sensor malfunctions, and logic faults. Participants gained valuable insights into the real-world challenges of maintaining and optimizing PLC-based systems. The event not only provided a platform to enhance technical expertise but also promoted networking among engineering enthusiasts. Overall, the PLC with troubleshooting workshop offered a dynamic learning experience, bridging the gap between theory and practical application in the realm of industrial automation.







## WORKSHOP ON ARM CONTROLLERS

The Electrical and Instrumentation Engineering (EIE) department of Kumaraguru College of Technology (KCT) orchestrated an enlightening workshop centred on Advanced RISC Machines (ARM) controllers, an integral component of the Yugam workshop series 1<sup>st</sup> March 2023. This workshop sought to empower participants with an in-depth understanding of ARM architecture and its multifaceted applications within the realm of embedded systems. The workshop sessions were meticulously crafted to provide participants with a comprehensive overview of ARM processor architecture, programming paradigms, and interfacing techniques. The emphasis on hands-on learning enabled attendees to actively engage with ARM controllers through practical projects and experiments, solidifying their conceptual knowledge with real-world applications. The workshop not only elucidated the technical aspects of ARM technology but also encouraged collaboration and knowledge exchange among participants who shared a common passion for embedded systems and cutting-edge technology. In a rapidly evolving technological landscape, the ARM controller workshop proved to be a pivotal platform for participants to delve into the intricacies of designing and optimizing embedded systems using ARM processors. By bridging theory with hands-on experience, the workshop provided a holistic learning environment, fostering both skill development and a deeper appreciation for the potential of ARM technology in driving innovation in various industries.



## WORKSHOP ON CALIBRATION

The EIE department of Kumaraguru College of Technology (KCT) orchestrated a highly informative workshop on the intricacies of calibrations, a significant component of the renowned Yugam workshop series 2<sup>nd</sup> March 2023. This workshop was meticulously designed to impart participants with a comprehensive understanding of calibration techniques, shedding light on their pivotal role in ensuring accuracy and reliability across diverse industries. Through interactive sessions, the workshop delved into the core principles of calibration, offering insights into precision measurement tools, calibration standards, and error analysis. Participants had the unique opportunity to engage in hands-on activities, enabling them to apply theoretical knowledge to practical situations. By bridging the gap between theory and application, attendees gained a nuanced appreciation for the intricacies of measurement accuracy and the mitigation of potential errors. The workshop highlighted the critical importance of calibration in upholding the quality and consistency of instruments and systems. By equipping participants with industry-relevant skills and knowledge, the calibration workshop not only bolstered their professional acumen but also prepared them to make valuable contributions to the fields of engineering and technology. This event, nestled within the Yugam workshop series, served as an enriching platform for participants to nurture their expertise and passion in calibration techniques.





## CHESS TOURNAMENT

On March 31, 2023, the Department of EIE organized a chess competition, which turned out to be an engaging and intellectually stimulating event for the department's students. The tournament managed to gather a total of 22 enthusiastic participants who were eager to test their strategic thinking and tactical skills on the chessboard. Spanning a duration of three hours, the competition consisted of approximately 5 rounds, ensuring that participants had ample opportunities to showcase their chess prowess. As the rounds progressed, it became evident that chess is not just a game of moves and tactics but also a mental exercise that demands a high level of focus, planning, and adaptability. The final round of the competition was a thrilling culmination of the participants' efforts. The winners of this round were determined based on their scores, reflecting their ability to not only outmanoeuvre their opponents but also to strategize effectively over the course of the multiple rounds. The recognition awarded to these top performers served as a testament to their dedication and skill within the realm of chess.





## **TECH EXPRESS 2.0**

TechExpress 2.0, a pioneering initiative by the EIE department of Kumaraguru College of Technology (KCT), has introduced an ingenious way of disseminating industrial insights. Through a series of engaging Instagram stories released every Wednesday, this initiative unveils the intricate world of instruments crucial in various sectors like pharmaceuticals, petroleum, and more. By spotlighting these instruments, TechExpress 2.0 offers a dynamic learning experience, enabling students and enthusiasts to delve into the practical applications and significance of these tools.

The succinct yet visually captivating stories not only provide a window into the diverse industries' technological landscape but also bridge the gap between classroom learning and real-world applications. By offering an accessible and digestible format, the initiative empowers participants with industry-specific knowledge that extends beyond textbooks.





### iACT-2023-Bangalore

The IACT- 2023 was held on 31<sup>st</sup> March and 1<sup>st</sup> April, organized by EIE department of BMS college of Engineering, Bangalore in association with ISA Bangalore Section. It is conducted for the benefit of student ISA members. From our college 14 students and 3 staff from EIE department attended IACT-2023. They participated in Pancea-Ideathon event, one of our team won the first place for the theme- industry, innovation and infrastructure. It was an incredible experience for them to be a part of IACT-2023. The event was truly inspiring and they learned so much from the speakers and attendees.





## EXEMPLARS OF EIE

The Department of Electronics and Instrumentation Engineering (EIE) at Kumaraguru College of Technology (KCT) has launched a new initiative focused on showcasing exemplars from the field of EIE. This initiative highlights the accomplishments of individuals within the EIE department and aims to share their experiences and successes. As part of this initiative, the department has highlighted the achievements of Mr. Siva Nikesh, who is presently employed at Schneider Electric. Mr. Siva Nikesh's journey and contributions within the field of electronics and instrumentation engineering have been featured to serve as an inspiration to others. His professional experiences and accomplishments serve as a testament to the potential and capabilities of individuals from the EIE department at KCT. The initiative by the Department of EIE at KCT provides a platform to not only recognize and celebrate the accomplishments of individuals like Mr. Siva Nikesh but also to promote and inspire current and future students in the field of electronics and instrumentation engineering. It serves as a means to share real-world success stories and experiences, fostering a sense of pride and motivation within the department and the broader academic community.



**Sivanikesh S R**  
DEPARTMENT OF ELECTRONICS AND  
INSTRUMENTATION ENGINEERING  
BATCH:2018-2022  
AILYAK



### WHO ARE YOU TO YOU ?

'I've always felt fantastical and go crazy about myself imagining myself as a KING, as a Lion, as a Billionaire, as a Rockstar and what not? Majestic, Energetic, Super Positive, Confident and Courageous are some traits I would keep daydreaming about! Ofcourse we do get sad and down at times, and the my best way is to divert myself spontaneously to another silly or a funny thing around, because if small things make you sad, then there will be smaller things would make you happy also! Haha... end of the day, I'm just a simple boy with supernatural dreams trying to live the life in the most fun engaging way as possible. Being happy for myself and making people around happy!...'





## FAREWELL 23

The farewell event for the students of the 2019 batch was successfully conducted on April 19, 2023, at 3 pm in the seminar hall of D-block. During the event, students from the same batch nostalgically and eagerly expressed their cherished memories with the department.



### **WELCOME ADDRESS:**

Gathering at 3:00 pm, the students congregated in their designated classroom, where the class advisor of the 2019 batch, Mr. Saravanakumar S, delivered a welcoming speech. In his address, he extended a warm welcome to Dr Saravanan D, the principal, Dr Dinesh Kumar V, the head of the department, and the students belonging to the 2019 batch. Mr. Saravanakumar S also took the opportunity to share his own fond recollections with the students as an integral part of his welcoming remarks.

### **ANNUAL REPORT:**

Mr. Sabarish G, the president of the department association, delivered the department's annual report during the event. The report encompassed a comprehensive overview of the department's activities,





comprising the count of organized events and workshops, notable accomplishments of both the department and its students, as well as particulars regarding student placements and career advancements.

### **FELCITATIONS:**

Following the formal speeches, the principal bestowed recognition upon the department's accomplishments and its high-achieving individuals, accompanied by words of honour. Subsequently, the Head of the Department reminisced about his own experiences with the students, sharing anecdotes that resonated with excitement. His joy in reliving those memories was palpable as he extended his appreciation to the students.

Following the Head of the Department's address, the faculty members took the opportunity to reflect upon their interactions with the students. They candidly discussed instances of mistakes and actions that either brought them happiness or frustration. Beyond this, they also imparted valuable real-life experiences and advice drawn from their own journeys.



### **FEEDBACK SESSION:**

During the feedback session, the students recounted their four-year journey with both the department and the college. Every single student took their turn to share their individual memories, encompassing both accomplishments and mistakes. They enthusiastically reminisced about the enjoyable activities that had taken place within the classrooms and



departments. As they expressed their sentiments, they openly acknowledged that they would soon be bidding farewell to college life, tinged with a touch of excitement.

### **FUN GAMES AND ENJOYMENT:**

The junior members of the 2019 batch orchestrated a series of enjoyable events that brought smiles and laughter to their senior counterparts. These creative minds organized icebreakers and engaging games, resulting in wonderfully interactive and enjoyable sessions. The senior students of the 2019 batch wholeheartedly embraced the games designed by their affectionate juniors, finding immense joy in their participation. They openly expressed their gratitude to the juniors, acknowledging the immense fun and excitement they had experienced and emphasizing that the memories crafted by their juniors would forever hold a special place in their hearts.



### **VOTE OF THANKS:**

Mr. Pavin P S, the secretary of the department association, expressed the vote of thanks. He extended his gratitude to the principal, the head of the department, and the students who actively contributed to the farewell event. He appreciated their collaborative efforts in creating unforgettable and meaningful moments during the farewell.

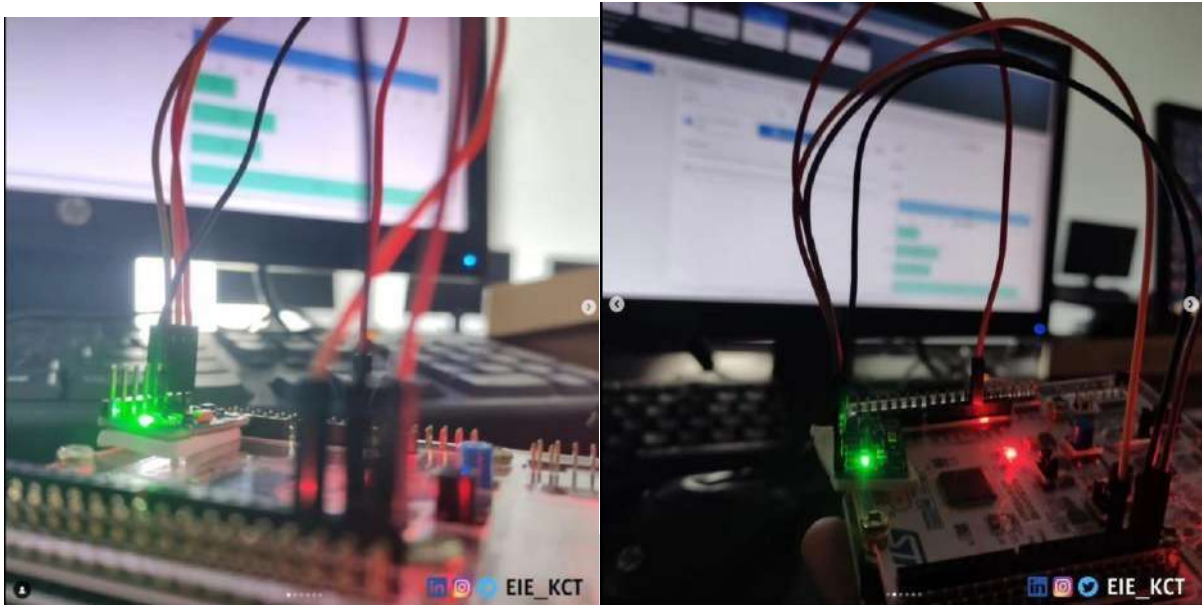


## EMBEDDED AI WORKSHOP

The workshop titled "Embedded AI," organized by Digitoad Technologies in collaboration with the Department of Electronics and Instrumentation Engineering (EIE), offered an insightful exploration into the amalgamation of Embedded Systems and Artificial Intelligence (AI). This event, spanning three days from August 1st to August 3rd, was effectively coordinated by the department's faculty members, Ms. Jeya Daisy I and Mr. Saravanakumar. Throughout the workshop, participants delved into the foundational principles of embedded systems and gained a comprehensive understanding of how AI technologies can seamlessly interface with them. Practical applications and case studies were presented to illustrate the tangible impact of this convergence in various real-world scenarios. The pivotal roles of Ms. Jeya Daisy I and Mr. Saravanakumar in orchestrating the workshop were instrumental in its success. Their coordination ensured the seamless execution of the sessions and facilitated a dynamic learning environment. Attendees were not only introduced to theoretical concepts but were also provided with hands-on experience, allowing them to experiment and gain practical insights into the fusion of Embedded Systems and AI. The workshop's overarching objective was to empower participants with the knowledge and skills to harness the synergies between Embedded Systems and AI effectively. By bridging these domains, the workshop opened up new avenues for innovation, problem-solving, and application development within the realm of electronics and instrumentation engineering. As a result, attendees left the workshop equipped with a deeper appreciation for the potential of Embedded AI and its transformative influence across industries.









## ACHIEVEMENTS OF EIE

### MAHATMA GANDHI MERIT SCHOLARSHIP



Figure 1. EIE students lead front of the team



Figure 2 2019-2023 Batch MG awardees





Figure 3 2020-2024 Batch MG awardees



Figure 4 2021- 2025 Batch Awardees





## ACHIEVERS AWARD 2023





























## MG -- AWARD



**EIE Students with MG-AWARD**



**BATCH'23 Students with MG- AWARD**



**BATCH'24 Students with MG-AWARD**



## GLOBAL STUDENT ENTREPRENEURSHIP AWARD

In a remarkable feat, Mr. Guhan K, a final-year student pursuing Electronics and Instrumentation Engineering (EIE) in the academic batch of 2020 to 2024, has been honoured with the prestigious Global Student Entrepreneurship Award. This distinguished accolade stands as a testament to his exceptional ingenuity, unwavering entrepreneurial spirit, and significant contributions within his field of study. Guhan's journey is characterized by his remarkable commitment to innovation and his ability to translate novel ideas into practical, impactful solutions. His ventures have demonstrated a keen understanding of bridging the gap between theoretical knowledge and real-world applications, exemplifying the essence of entrepreneurship. This coveted award not only recognizes Guhan's achievements but also celebrates his potential to shape the entrepreneurial landscape. His accomplishments serve as an inspiration to fellow students, faculty, and the wider academic community. His journey underscores the power of nurturing innovation, perseverance, and a proactive approach to learning. As a recipient of the Global Student Entrepreneurship Award, Guhan K's legacy reflects the boundless possibilities that arise from the fusion of academic prowess with entrepreneurial acumen. His journey resonates as a beacon of encouragement for future entrepreneurs, showcasing how dedication, creativity, and a profound understanding of one's field can lead to transformative accomplishments.







## TANCET

It is with great joy and admiration that we extend our heartfelt congratulations to Mrs. Shanthini, an exceptional graduate of the Electronics and Instrumentation Engineering (EIE) program spanning from 2019 to 2023. Achieving a remarkable score of 93.9 in engineering is a true testament to your exceptional dedication, tireless effort, and profound understanding of the subject matter. Your commitment to your studies, coupled with your intellectual curiosity, has undoubtedly contributed to this remarkable achievement. Your success not only reflects your personal excellence but also serves as an inspiration to fellow students, faculty, and the entire academic community. Equally deserving of applause is Mrs. Neha, who has achieved a remarkable score of 97.3 in her MBA studies. This outstanding accomplishment showcases your exceptional aptitude in the field of business administration. Your ability to excel academically while embracing the complexities of the business world is truly commendable. Your achievement not only highlights your intellectual prowess but also underscores your dedication to excellence and your potential to excel in your future professional endeavours. Both of you have showcased qualities of diligence, discipline, and determination that set a shining example for others. Your achievements reflect not only your academic brilliance but also your capacity to embrace challenges and emerge victorious. As you move forward on your respective paths, we are confident that your dedication and drive will continue to guide you to even greater accomplishments. May your success continue to inspire and motivate those around you. Congratulations once again on your exceptional achievements!



**KUMARAGURU**  
Institutions

**Congratulations**



**NEHA S**  
scored 97.3 in  
**TANCET (MBA) 2023**  
**FINAL YEAR-EIE**

  EIE\_KCT

**KUMARAGURU**  
Institutions

**Congratulations**



**SHANTHINI M K**  
scored 93.97 in  
**TANCET 2023**  
**FINAL YEAR-EIE**

  EIE\_KCT

