



You Choose, We Do It

St. JOSEPH'S COLLEGE OF ENGINEERING
(An Autonomous Institution)

St. Joseph's Group of Institutions

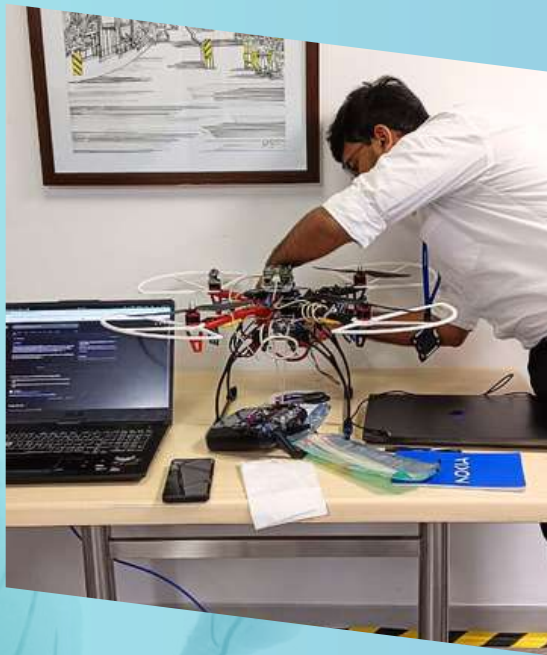
OMR, Chennai - 119



DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

Newsletter

October 2024



St. JOSEPH'S
GROUP OF INSTITUTIONS
OMR, CHENNAI - 119



The Choice of
Disciplined Toppers



VISION

To become a world class renowned department where dissemination and application of knowledge in design and analysis of electronic circuits in the field of communication is delivered and to synergistically balance through relentless pursuit of student success towards the economic prosperity of the society and the world at large.

MISSION

Professionalism: Achieve excellence in teaching, learning, and educational activities which ensure that each student has the opportunity to attain his or her fullest potential

Core Competence: Inculcate innovative skills, research aptitude, team-work, ethical practices in students so as to meet expectations of the industry as well as society.

Research: Provide research and intellectual resources that address problems facing the industry and the world, while advancing the boundaries of disciplinary and multidisciplinary research and its applications.

Industrial Interaction: Provide professional development opportunities for all by creating an open and accessible learning environment and incorporating appropriate technology through collaboration with industry

PROGRAM OUTCOMES

1. **Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution complex engineering problems.
2. **Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.
3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or process that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal and environmental considerations.



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4. Conduct investigations of complex problems: Use research based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to proceed valid conclusions.
5. Modern tool usage: create, select and apply appropriate techniques, resources and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
6. The engineer and society: 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.
7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of and need for sustainable development.
8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
9. Individual and team work: Function effectively as an individual and as a member or leader in diverse teams, and in multidisciplinary settings.
10. Communication: 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.
11. Project management and finance: 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.
12. Life-long learning: 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.

PROGRAM EDUCATIONAL OBJECTIVES

1. To enable graduates to pursue research, or have a successful career in academia or industries associated with Electronics and Communication Engineering, or as entrepreneurs.
2. To provide students with strong foundational concepts and also advanced techniques and tools in order to enable them to build solutions or systems of varying complexity.
3. To prepare students to critically analyze existing literature in an area of specialization and ethically develop innovative and research oriented methodologies to solve the problems identified.

EVENTS OF OCTOBER - 2024

- **Alumni Activities**
- **Placement Activities**
- **Seminar Organized**
- **Workshop Organized**
- **AICTE ATAL Advanced FDP**
- **NEXTRONIX' 24 - Hardware Hackathon**
- **Student Achievements**
- **Staff Achievements**

ALUMNI ACTIVITIES

MOCK Interview



The ECE Department of St. Joseph's College of Engineering organized a Mock Interview session on 5th October 2024, aimed at preparing 3rd-year ECE students for their upcoming placements. The event was organized by the ECE Placement Cell and took place at the Placement Block from 01:00 PM to 4:30 PM. The primary objective of this event was to provide students with an opportunity to experience a real-time interview scenario, gain valuable insights, and prepare for future placement opportunities.

PLACEMENT ACTIVITIES

5G Technology -Technical Session by NOKIA



Technical Session was hosted by ECE department to 5G students session handled by Mr.Veera and Poonam from Nokia. The workshop provided an overview of 5G and Multi-access Edge Computing (MEC) technologies. It discussed the shift from monolithic implementations to virtualized systems, highlighting the role of hypervisors and virtualization in optimizing resource utilization. The workshop also explored the benefits of MEC in reducing latency for real-time applications.

PLACEMENT ACTIVITIES



A six-day placement training program was conducted in ECE Department from 21st to 26th October 2024 by Retch Techno Solutions and Learning Saga LLP for 121 second-year ECE students with a CGPA of 7.5 and above. The program aimed to enhance students' technical skills in hardware and software domains. Hardware training focused on PCB design and IoT fundamentals, while software training covered C programming and data structures. This comprehensive training equipped students with practical skills, problem-solving abilities, and industry-relevant knowledge, preparing them for academic and professional challenges.

PLACEMENT ACTIVITIES

Syasan Empowers ECE Students with Future-Ready Skills



Third and final-year ECE students at recently underwent intensive training in UI/UX design, RDBMS & SQL, and ReactJS, conducted by Syasan's Career Analytics Technology Solutions. This initiative aims to equip students with essential software skills, making them more competitive in today's tech-driven job market. As the demand for user-centric and data-driven solutions grows, these skills are becoming increasingly important for ECE engineers. By mastering UI/UX, RDBMS & SQL, and ReactJS, students can contribute to the development of innovative IoT devices, smart electronics, and web applications.

PLACEMENT ACTIVITIES

Students Employability Enhancement Research Activities SEERA



Student Employability Enhancement & Research Activity (SEERA) event on October 18, 2024 aims to equip students with essential skills for a successful career path. The event includes a session on "Communication Excellence in Engineering," coordinated by Santhosh R., which focus on effective communication skills critical for engineers in technical and professional environments. The "Higher Package Placement" session, titled "The Road to Six-Figure Salaries" and coordinated by Benita Jael J., provided the guidance on securing high-paying job offers, including resume building, interview preparation, and industry trends. Edith Praiselien P., lead a session on "Effective Strategies for Placement," offering students practical insights on job search strategies, networking, and industry expectations. For those aiming for advanced studies, the "Higher Studies" session, titled "Pathway to Higher Education," coordinated by Yuthika A. and Mohanraj P., covered the opportunities for further studies, including application processes, scholarships, and course selection.

PLACEMENT ACTIVITIES

Students Employability Enhancement Research Activities SEERA



On October 4, 2024, held a SEERA session focused on enhancing students' professional and technical skills for improved employability. The program included insightful sessions on data-driven career navigation, personal branding, networking, and leveraging emotional intelligence for career growth. Students explored the value of higher education in aligning with industry trends, learned effective strategies for placement preparation, and gained practical insights into building personalized resumes, optimizing LinkedIn profiles, and mastering interview techniques. Technical sessions covered core concepts in "Signals and Systems," emphasizing their importance for technical roles, along with Skill Rack exercises to improve coding skills in C, Python, and Java. The event empowered students with key industry competencies, highlighted pathways for further education, and provided a structured approach to career advancement.

SEMINAR ORGANIZED

Innovate with Intelligence: The Rise of Generative AI and its future scope.



Samuel Tensingh
Researcher
School of Biomedical Engineering
University of Sydney, Australia

 <https://meet.google.com/jwh-ntoc-yml>

 **09.10.2024**

 **ECE SMART CLASSROOM**

 **11:00AM- 12:20 Noon**

 **ABHS Members**



The seminar "Innovate with Intelligence: The Rise of Generative AI and its Future Scope" was hosted by the Department of Electronics & Communication Engineering , featured Samuel Tensingh from the University of Sydney, who discussed the potential of generative AI, particularly in the context of VLSI and semiconductors.

Workshop Organized

CAREER COMPASS



A two-day workshop was conducted by ECE department on October 9th and 10th, 2024, to equip third and final-year students with essential career skills. Day one focused on resume building, where students learned how to craft professional resumes that stand out to potential employers. Expert guidance from Mrs. Nithya Priya and Mr. Gokula Krishnan helped students understand key components of effective resumes, including structure, content, and formatting. On day two, a mock interview session provided students with a realistic experience of job interviews. Industry professionals conducted one-on-one interviews, offering valuable feedback on communication, problem-solving, and overall performance.

AICTE Sponsored ATAL

Advanced Faculty Development Programme

Unlocking the Potential of AI: Journey from Transformer Models to Gen AI, Applications from Industry to Space , and the Evolving Threat Landscape



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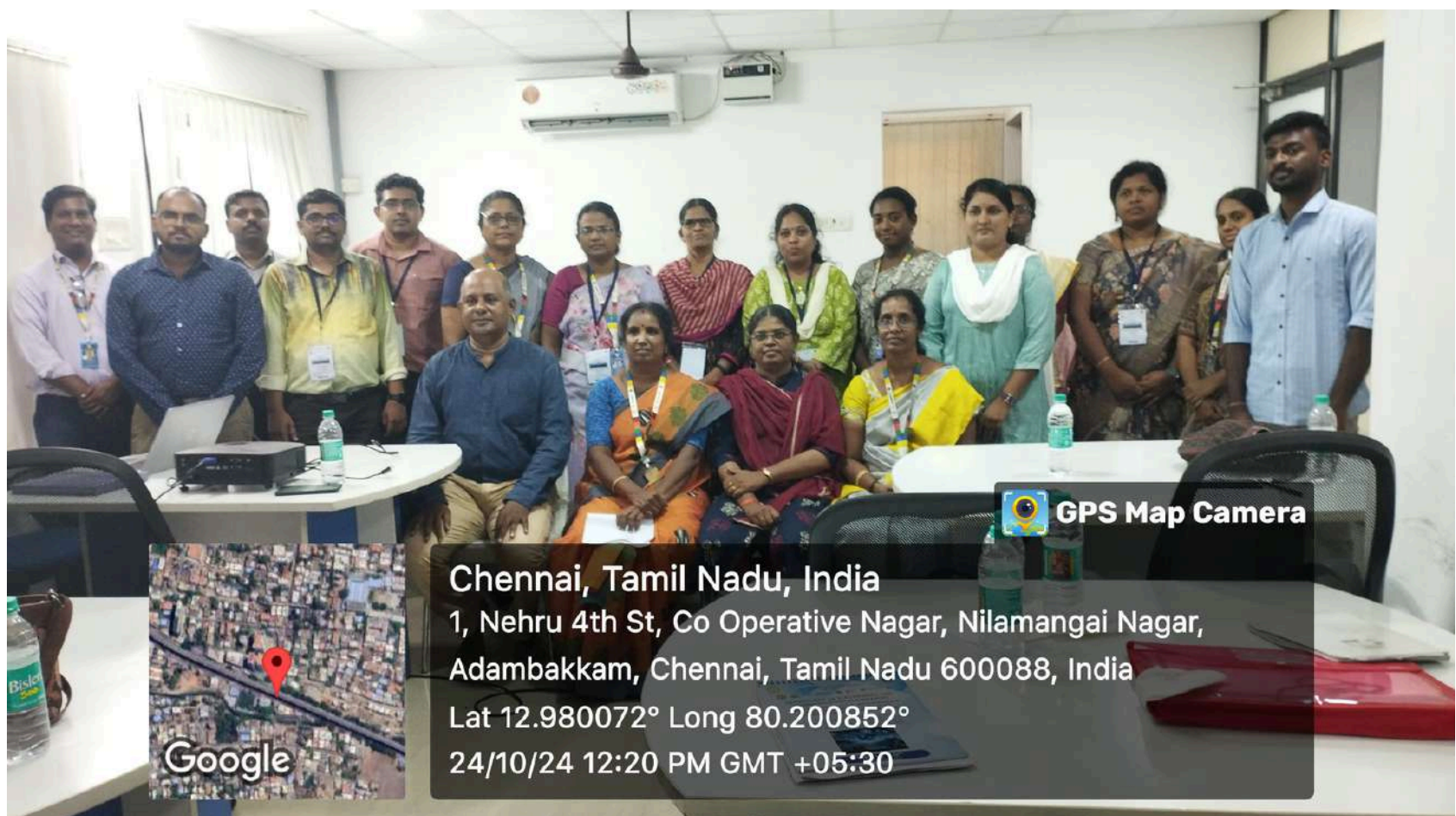


The Department of Electronics and Communication Engineering hosted a two-week AICTE Sponsored ATAL Advanced Faculty Development Programme on "Unlocking the Potential of AI: Journey from Transformer Models to Gen AI, Applications from Industry to Space, and the Evolving Threat Landscape." The programme delved into the latest advancements in Artificial Intelligence, focusing on transformer models and generative AI, while exploring their broad applications across various industries, including space, and addressing the emerging AI-driven threat landscape. Esteemed chief guests, **Dr. P. Vanaja Ranjan**, Director of the Centre for Faculty Development and Professor in the **Dept of EEE at Anna University**, along with **Dr. Vandita Srivastava**, Scientist SG, Head of the **Dept of Geo-Informatics at ISRO, IIRS, Dehradun, Uttarakhand**, led the event on 14th October 2024.

AICTE Sponsored ATAL

Advanced Faculty Development Programme

Object Automation System Solutions (P) Ltd. - Industrial Visit

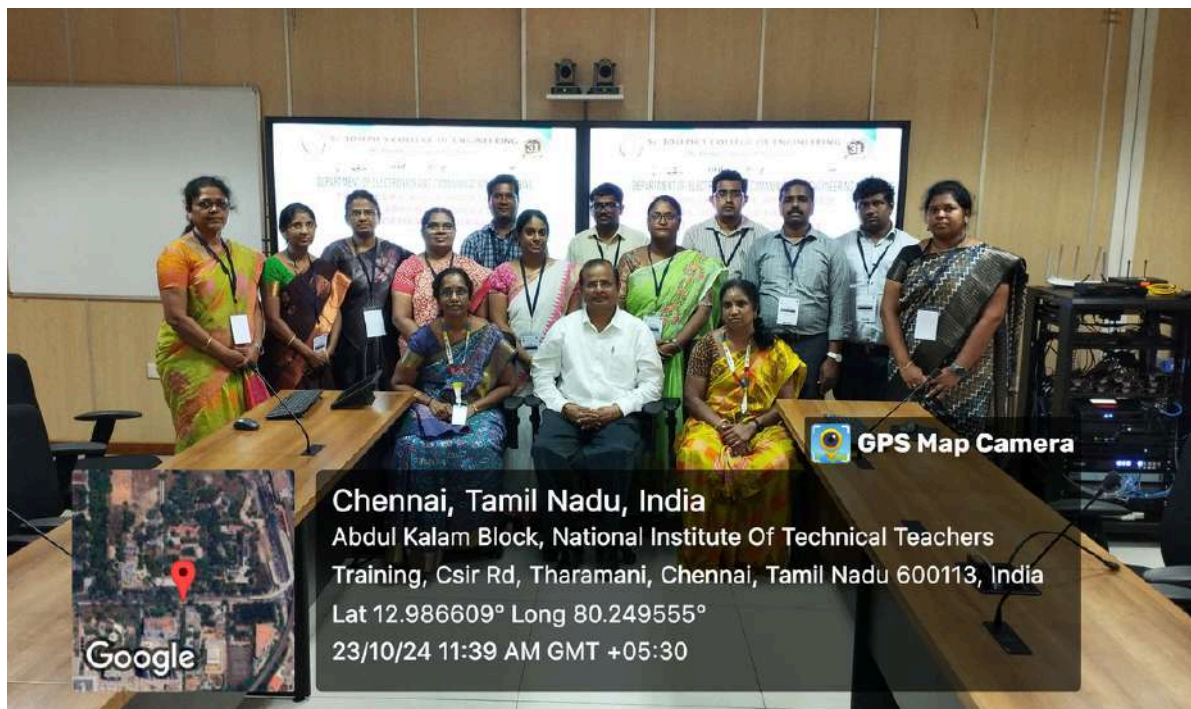


Our faculty recently had the pleasure of learning from industry expert Mrs. Sri Kanmani, CTO and Co-founder of Object Automation System Solutions (P) Ltd. On October 24th, 2024, Mrs. Kanmani delivered a captivating session on the cutting-edge field of Generative Artificial Intelligence (Gen AI) and its applications. This insightful session covered the latest advancements in Transformer Models and Natural Language Processing (NLP), both of which play a crucial role in Gen AI. This industry visit provided valuable insights into the real-world applications of AI and its potential to revolutionize various sectors.

AICTE Sponsored ATAL

Advanced Faculty Development Programme

NITTTR Chennai - Industrial Visit



On October 23rd, AI Enthusiasts from the ATAL FDPs participated in an enriching industry visit. Dr. Kulanthaivel.G, Head of the Department of EECE at NITTTR, Chennai, led a session on "Pedagogy Teaching Practices" and the "Impact of AI in 3D Printing." This session explored innovative teaching methods and how AI is transforming the field of 3D printing. Additionally, Dr. Velu Shanmuga neethi, Professor at the National Institute of Technical Teachers' Training and Research, Chennai, provided valuable insights on "Cyber Security at Industry." This comprehensive session equipped our faculty with the knowledge and skills to integrate new technologies and safeguard against cyber threats.

AICTE Sponsored ATAL

Advanced Faculty Development Programme

TERV PRO - Industrial Visit



Our ATAL Faculty Development Program participants embarked on an industry visit on October 22nd, 2024. They had the privilege of learning from Mr. Anto Ajith, Chief Operating Officer of Terv Pro, Chennai. Mr. Ajith delivered a captivating session on "Transfer Learning Techniques for Computer Vision Applications." This session equipped our faculty with valuable knowledge on leveraging pre-trained models to enhance computer vision applications, a crucial skill in today's AI landscape.

AICTE Sponsored ATAL

Advanced Faculty Development Programme

ERNET India - Industrial Visit



ERNET India: A Glimpse into the Future of Technology

On October 25th, a group of enthusiasts embarked on an enriching industrial visit to ERNET India, located at the IIIT Research Park, Chennai. The visit provided a unique opportunity to explore cutting-edge technologies and gain insights into the future of networking. Participants delved into the intricacies of LiFi, Cyber Forensics, Campus Networks, Rural Connectivity, and Quantum Communications. The interactive session with experts at ERNET India offered valuable insights into the challenges and opportunities in the field of technology.

AICTE Sponsored ATAL

Advanced Faculty Development Programme

Valedictory Ceremony



The AICTE sponsored ATAL Advanced Faculty Development Program on "Unlocking the Potential of AI: Journey from Transformer Models to GenAI, Applications from Industry to Space, and the Evolving Threat Landscape" concluded on October 26th, 2024, with a valedictory function. After showcasing their innovative project work, participants shared their experiences and insights gained over the intensive 12-day program. The event celebrated the collective learning journey, highlighting the program's success in equipping faculty members with the latest knowledge and skills in the field of artificial intelligence.

NEXTRONIX' 24

A 24 Hours Internal Hardware Hackathon



NEXTRONIX' 24

A 24 Hours Internal Hardware Hackathon



Department of Electronics and communication has recently hosted a 24-hour Internal Hardware Hackathon, Nextronix'24, on October 18th and 19th, 2024. This event was a platform for students from all years of St. Joseph's Group of Institutions to showcase their innovative hardware projects, fostering experiential learning and leadership development. Forty teams from various departments participated, competing for a cash prize of Rs. 20,000. The hackathon aimed to inspire students to address real-world challenges and gain valuable practical experience, ultimately boosting their confidence and preparing them for future endeavors. By providing an opportunity to apply their classroom knowledge to real-world problems, the event encouraged creativity, teamwork, and problem-solving skills among the participants.

NEXTRONIX' 24

A 24 Hour Internal Hardware Hackathon Glimpse of Evaluation



NEXTRONIX' 24

A 24 Hour Internal Hardware Hackathon Glimpse of Contest



NEXTRONIX' 24

A 24 Hour Internal Hardware Hackathon Laureate Data

S. No.	TEAM NAME	TEAM MEMBERS	YEAR & DEPT	TITLE OF THE PROJECT	NAME OF THE COLLEGE	MENTOR	POSITION
1.	BIO-BOTS	1. Gerald Adarsh K 2. Gowtham V 3. Vijhay Krishnaa B 4. Hariharan D K	II BIOTECH	Designing a Customizable Medical Glove for Therapeutic Applications	St. Joseph's College of Engineering	Ms. S. Yuwvaranni Assistant Professor (BIOTECH)	I (Rs.10,000)
2.	AIRBEN	1. Hariharan SP 2. Aravinth J 3. Maneesh V	III ECE & AML	Drone-Based Search and Rescue Operation in Disaster Management	St. Joseph's College of Engineering	Dr. P. Ezhilarasi Professor (ECE) Mr. M. Lingeswaran Assistant Professor (ECE)	II (Rs.7,000)
3.	AQUA FIT TRAINER	1. Vishnu Varshan A 2. Arun Kumar K 3. Surya Kumar R 4. Jayasruthi S	IV EIE	Revolutionizing Swimming Training with IoT-Powered Touch Pad Timing	St. Joseph's College of Engineering	Dr. S. Meena Associate Professor & Head (EIE) Dr. B. Senthil Kumar Associate Professor (EIE)	III (Rs.3,000)



NEXTRONIX' 24

A 24 Hour Internal Hardware Hackathon Hackathon Champions



Congratulations to Hariharan SP, Aravinth J, and Maneesh V of 3rd year ECE on their impressive achievement of winning the Cash prize of Rs. 7000 at NEXTRONIX '24 Internal Hardware Hackathon! Their project on Drone-Based Search and Rescue Operation in Disaster Management, under the guidance of Dr. P. Ezhilarasi and Mr. M. Lingeshwaran, is a testament to their innovative thinking and dedication.

Students Achievements

NPTEL Stars



NPTEL Star: Edith Praiselin P: Edith's outstanding performance in the NPTEL course "Introduction to Machine Learning" course has earned her the prestigious **Elite+Gold ranking**.

Benita Jael J, Deepika M, Jenefa Joy A B, Mathivathana S R, and Piriadarshini K of final-year ECE students have excelled in the "Introduction to Machine Learning" course on NPTEL, achieving **Elite+Silver (75-89%) rankings**.

Ajay Kumar.P, final year ECE Student achieved an **Elite+Silver (75-89%) ranking** in the Sensors Technologies: Physics, Fabrication and Circuits course exam conducted by NPTEL.

THOSHITA FEBBI B, third year ECE student achieved an **Elite+Silver (75-89%) ranking** in "System Design through Verilog" course exam conducted by NPTEL.

STUDENT ACHIEVEMENTS

Internship - EMBLOCK TECH Pvt. Ltd.



Five ECE students from the third year have secured internships at EMBLOCK TECH Pvt. Ltd. They secure internship with a stipend of Rs.10,000, this opportunity will provide students with valuable practical experience and the chance to enhance their skills in various tools and technologies.

STUDENT ACHIEVEMENTS

Internship- IQmath Technologies



IQmath Technologies Internship Opportunity

Fifteen ECE students from the third year have secured internships as Full Stack Data Analytics Interns at IQmath Technologies. The internship will commence on January 6, 2025, and conclude on April 6, 2025. With a stipend of ₹8,000, this three-month program will provide students with valuable practical experience and the chance to enhance their skills in various tools and technologies while working alongside the experienced team at IQmath.

STUDENT ACHIEVEMENTS

Champions in Ideathon Contest Nokia 5G Test bed



A Triumph of Innovation: ECE Students Clinch First Place in Nokia's 5G Ideathon

Our final-year Electronics and Communication Engineering students have made us proud by securing the first position in the Ideathon Contest organized by the Nokia Bangalore University Collaboration (NBUC). Their groundbreaking project, "Bird's AI: Drone-based Search and Rescue Operations in Disaster Management," showcased their innovative approach to leveraging technology for societal good. By seamlessly integrating their solution with Nokia's cutting-edge 5G Test Bed, our students demonstrated the immense potential of 5G technology in revolutionizing disaster response efforts. This remarkable achievement is a testament to their technical brilliance, problem-solving skills, and dedication to creating a positive impact on the world.

STUDENT ACHIEVEMENTS

Glimpse of Ideathon Contest



STAFF ACHIEVEMENTS

NPTEL Achievers

Mrs. G. Anitha have achieved an ELITE position in the NPTEL Python for Data Science course

GD Vignesh has successfully completed 4 weeks NPTEL course on Basics of SDR and its Applications .

Mrs. M. Angelin Ponrani have achieved an ELITE position in the NPTEL Python for Data Science course

PUBLICATIONS

S.Aghalya,” Cloud based prediction of epileptic seizures using real-time electroencephalograms analysis” International Journal of Electrical and Computer Engineering, vol 14, no.5, pp. 6047–6056

STAFF ACHIEVEMENTS

PATENTS PUBLISHED

- **S.AGHALYA** has published a patent titled “Wearable IOT Bands for stress regulation with Adaptive machine learning techniques”.
- **Mrs.S.Devipriya** has published a patent titled “SYSTEM AND METHOD FOR BLOCK-CHAIN BASED CREDIBILITY VERIFICATION OF INTERNET OF THINGS (IOT) ENTITIES”
- **Mrs P.Elaveni** has published a patent titled “EDGE COMPUTING PLATFORM FOR LOW-LATENCY IOT APPLICATIONS”.
- **Mrs.G.Anitha** has Published a Patent titled “Enhancing mathematical reasoning and self-efficacy with problem based learning, contextual teaching and machine learning integration

Staff Achievements

FDP ATTENDED

Dr. B Victoria Jancee, has successfully participated & completed AICTE Training And Learning (ATAL) Academy Faculty Development Program on Unlocking the Potential of AI: Journey from Transformer Models to GenAI, Applications from Industry to Space, and the Evolving Threat Landscape at ST. JOSEPH'S COLLEGE OF ENGINEERING from 14/10/2024 to 26/10/2024.

Dr.S.Aghalya has successfully participated & completed AICTE Training And Learning (ATAL) Academy Faculty Development Program on Unlocking the Potential of AI: Journey from Transformer Models to GenAI, Applications from Industry to Space, and the Evolving Threat Landscape at ST. JOSEPH'S COLLEGE OF ENGINEERING from 14/10/2024 to 26/10/2024.

Dr.P.Ezhilarasi has successfully participated & completed AICTE Training And Learning (ATAL) Academy Faculty Development Program on Unlocking the Potential of AI: Journey from Transformer Models to GenAI, Applications from Industry to Space, and the Evolving Threat Landscape at ST. JOSEPH'S COLLEGE OF ENGINEERING from 14/10/2024 to 26/10/2024.

Dr.S.Vinayagapriya has successfully participated & completed AICTE Training And Learning (ATAL) Academy Faculty Development Program on Unlocking the Potential of AI: Journey from Transformer Models to GenAI, Applications from Industry to Space, and the Evolving Threat Landscape at ST. JOSEPH'S COLLEGE OF ENGINEERING from 14/10/2024 to 26/10/2024.

Mrs.R. Madhumitha has successfully participated & completed AICTE Training And Learning (ATAL) Academy Faculty Development Program on Unlocking the Potential of AI: Journey from Transformer Models to GenAI, Applications from Industry to Space, and the Evolving Threat Landscape at ST. JOSEPH'S COLLEGE OF ENGINEERING from 14/10/2024 to 26/10/2024.

Mrs.S.Devipriya has successfully participated & completed AICTE Training And Learning (ATAL) Academy Faculty Development Program on Unlocking the Potential of AI: Journey from Transformer Models to GenAI, Applications from Industry to Space, and the Evolving Threat Landscape at ST. JOSEPH'S COLLEGE OF ENGINEERING from 14/10/2024 to 26/10/2024.

Staff Achievements

FDP ATTENDED

Mr.G.D.Vignesh has successfully participated & completed AICTE Training And Learning (ATAL) Academy Faculty Development Program on Unlocking the Potential of AI: Journey from Transformer Models to GenAI, Applications from Industry to Space, and the Evolving Threat Landscape at ST. JOSEPH'S COLLEGE OF ENGINEERING from 14/10/2024 to 26/10/2024.

Mrs.M.Angelin Ponrani has successfully participated & completed AICTE Training And Learning (ATAL) Academy Faculty Development Program on Unlocking the Potential of AI: Journey from Transformer Models to GenAI, Applications from Industry to Space, and the Evolving Threat Landscape at ST. JOSEPH'S COLLEGE OF ENGINEERING from 14/10/2024 to 26/10/2024.

Dr.M.Suresh has successfully participated & completed AICTE Training And Learning (ATAL) Academy Faculty Development Program on Unlocking the Potential of AI: Journey from Transformer Models to GenAI, Applications from Industry to Space, and the Evolving Threat Landscape at ST. JOSEPH'S COLLEGE OF ENGINEERING from 14/10/2024 to 26/10/2024.

Dr.D.Sumithra Sofia has successfully participated & completed AICTE Training And Learning (ATAL) Academy Faculty Development Program on Unlocking the Potential of AI: Journey from Transformer Models to GenAI, Applications from Industry to Space, and the Evolving Threat Landscape at ST. JOSEPH'S COLLEGE OF ENGINEERING from 14/10/2024 to 26/10/2024.

Dr.A.Simon Prabhu has successfully participated & completed AICTE Training And Learning (ATAL) Academy Faculty Development Program on Unlocking the Potential of AI: Journey from Transformer Models to GenAI, Applications from Industry to Space, and the Evolving Threat Landscape at ST. JOSEPH'S COLLEGE OF ENGINEERING from 14/10/2024 to 26/10/2024.

Dr. D. Sumithra Sofia has attended Faculty Development Programme on “Future Ready Antenna Design-cutting Edge solution for 5G-mm wave and Beyond” at VIT, Chennai School of Electronics Engineering from 14.10.2024 -18.10.2024

TO KNOW MORE ABOUT DEPARTMENT ACTIVITIES

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