

**SKCT**  
**DIGEST**

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“Everything is theoretically impossible,  
until it is done”  
– **Robert A. Heinlein.**

## Contact Us

☎ 0422-2984567 - 68  
Kovaipudur,  
Coimbatore - 641 042.

## ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

### Academic Review Meeting

The Dept. of ADS conducted the “**Academic Review Meeting**” for the Students of First B.Tech. ADS and their parents on 29 October 2024.





## ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

### Student Participation

**Mr Ananias Remo A**, Student of Second B.Tech. ADS, completed an **“Online Certification Course”** through Infosys Springboard.



## ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

### Student Traineeship

**Mr Elangovan M**, Student of Second B.Tech. ADS, completed **“Traineeship”** through Ui/Ux Traineeship.



# CSE (CYBER SECURITY)

## Students' Participation

The Dept. of CSE (Cyber Security) organised events on **“Code Quest and Secure Sphere”** as a part of **CYBER SURAKSHIT BHARAT**, a special initiative in support of the National Cyber Security Awareness Month (NCSAM) on 24 October 2024.





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SUSTAINABLE  
DEVELOPMENT  
GOALS



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NATIONAL ACADEMIC  
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MECH | IT



nirf  
Band 151-200  
Engineering 2024



INSTITUTION'S  
INNOVATION  
COUNCIL  
(Ministry of Education Initiative)  
★★★★★

SKCT DIGEST

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## CSE (AML )

### Student Participation

**Mr Navindran V**, Student of Second B.E. CSE (AI&ML), participated in the **“Level 1 E-Commerce and Tech Quiz of the Flipkart GRID 6.0 – Software Development Track”** organised by the Flipkart.





## CSE (AML )

### Student Participation

**Mr Navindran V**, Student of Second B.E. CSE (AI&ML), completed one-month internship programme on Artificial Intelligence at **CODSOFT** during 25 September-25 October 2024.

C.ID: 40ebbf0



# CERTIFICATE

OF COMPLETION  
PROUDLY PRESENTED TO

**Navindran.V**

has successfully completed 4 weeks of a virtual internship program in  
**Artificial Intelligence**  
with wonderful remarks at **CODSOFT** from 25/09/2024 to 25/10/2024.

We were truly amazed by his/her showcased skills and invaluable contributions to the tasks and projects throughout the internship.



Founder



contact@codsoft.in      www.codsoft.in      Date: 28/10/2024



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SUSTAINABLE DEVELOPMENT GOALS



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## CSE (AML)

### Student Participation

**Mr Navindran V**, Student of Second B.E. CSE (AI&ML), participated in the **“TATA Crucible Campus Quiz 2024”** organised by the Tata Group.





## CSE (IoT)

### Students' Participation

**Ms Apoorva J** and **Ms Sneha Lakshmi S**, Students of Third B.E. CSE (IoT), bagged the **Second Prize** in **EBG Socio Innovation Summit 2024** organised with the theme of "Empowering Women Empowering Society" on 26 October 2024. The team received **Rs. 15000/-** to implement the proposed project on "Kriti Sakthi - An AI-powered Integrated Platform for SHG Farmers."



## CSE (IoT)

### Students' Participation

Mr Adarsh S, Mr Ashwin Raghavendran, Mr Mohammed Hafeez N, Mr Mounesh M and Mr Dharaneesh A, Students of First B.E. CSE (IoT), participated in Top Engineers' workshop on “IC Engines, Electric and Hybrid Vehicles” in association with Mechanica 2024, IIT Madras on 27 October 2024.





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Engineering 2024



INSTITUTION'S INNOVATION COUNCIL  
(University of Education Institute)  
★★★★★

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## CIVIL ENGINEERING

### Faculty Participation

**Dr P Subashree**, Assoc. Professor, participated in a Seven-day National level Online FDP on **“Future – Ready Educators: Transforming Teaching and Learning in the Present Scenario”** during 07-14 August 2024.

**HINDUSTHAN COLLEGE OF ARTS & SCIENCE**  
Autonomous Institution – Affiliated to Bharathiar University  
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Accredited by NAAC with 'A++' Grade  
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**Department of Commerce with CA & Commerce (IT & BI)**  
**JOINTLY ORGANIZE**  
**SEVEN DAYS NATIONAL LEVEL ONLINE FACULTY DEVELOPMENT PROGRAMME**  
**ON**  
**“FUTURE – READY EDUCATORS: TRANSFORMING TEACHING AND LEARNING IN THE PRESENT SCENARIO”**  
**CERTIFICATE**

has Participated in Seven Days National Level Online Faculty Development Programme on “ Future – Ready Educators: Transforming Teaching and Learning in the Present Scenario” held from 07.08.2024 to 14.08.2024 organized by Department of Commerce with CA & Commerce (IT & BI), Hindusthan College of Arts & Science (Autonomous), Coimbatore -641028.

**Dr.M.S.Loganathan**  
Professor & Head  
Commerce with CA  
CONVENOR

**Dr.R.Rajesh**  
Professor & Head  
Commerce (IT & BI)  
CONVENOR

**Dr.A.Ponnusamy**  
Principal  
PATRON

Made for free with Certify'em



## CIVIL ENGINEERING

### Students' Achievements

The following Students of Final B.E. Civil Engineering have been selected by M/s Aarbee Structures with 3.2 LPA + allowances:



**Athmin M**



**Mohan Raj K**



**Dhanush VG**



**Yokeshwaran C**



**Atchaya R S**



**Dishita A S**



**Rithu Burniga R**



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INSTITUTION'S INNOVATION COUNCIL (University of Education Institute) ★★★★★

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## COMPUTER SCIENCE AND ENGINEERING

### Faculty Participation

**Ms G Sandhya**, Asst. Professor, attended an FDP on **“Applied AI: Practical Implementations”** during 14-18 October 2024.



## COMPUTER SCIENCE AND ENGINEERING

### Students' Participation

**Ms Arunjuna Devi R,**  
Student of Second B.E.  
CSE, created an awareness  
on **“Importance of Higher  
education”** among  
Government School  
students of Grade 10.



**Ms Vishnu Priya R,**  
Student of Second B.E.  
CSE, bagged the **First  
Prize** in Paper Presentation  
at Maria College of  
Technology, Kanyakumari.





## COMPUTER SCIENCE AND ENGINEERING

### Students' Participation

Ms Sriharini R, Ms Sugena Munavara K and Ms Munavara K, Student of Second B.E. CSE, participated in the "Quest Nexus" event in Anokha 2024, the 12th National level Techfest organised by Amrita Vishwa Vidyapeetham, Coimbatore.



## ELECTRONICS AND COMMUNICATION ENGINEERING

### Students' Participation

Ms K Divyadharshini, Ms P Dalinee, Ms V Ashika and Ms M Harshini, Students of First B.E. ECE, participated in “Unique’s Manifest” organised by Rotaract Club of Coimbatore on 26 October 2024.



# ELECTRONICS AND COMMUNICATION ENGINEERING

## Students' Participation

Mr S U Krishnan, Mr J Krishna Kanth, and Mr M P Nivas, Students of First B.E. ECE, participated in a workshop on “Web Automation” at IIT Madras on 27 October 2024.

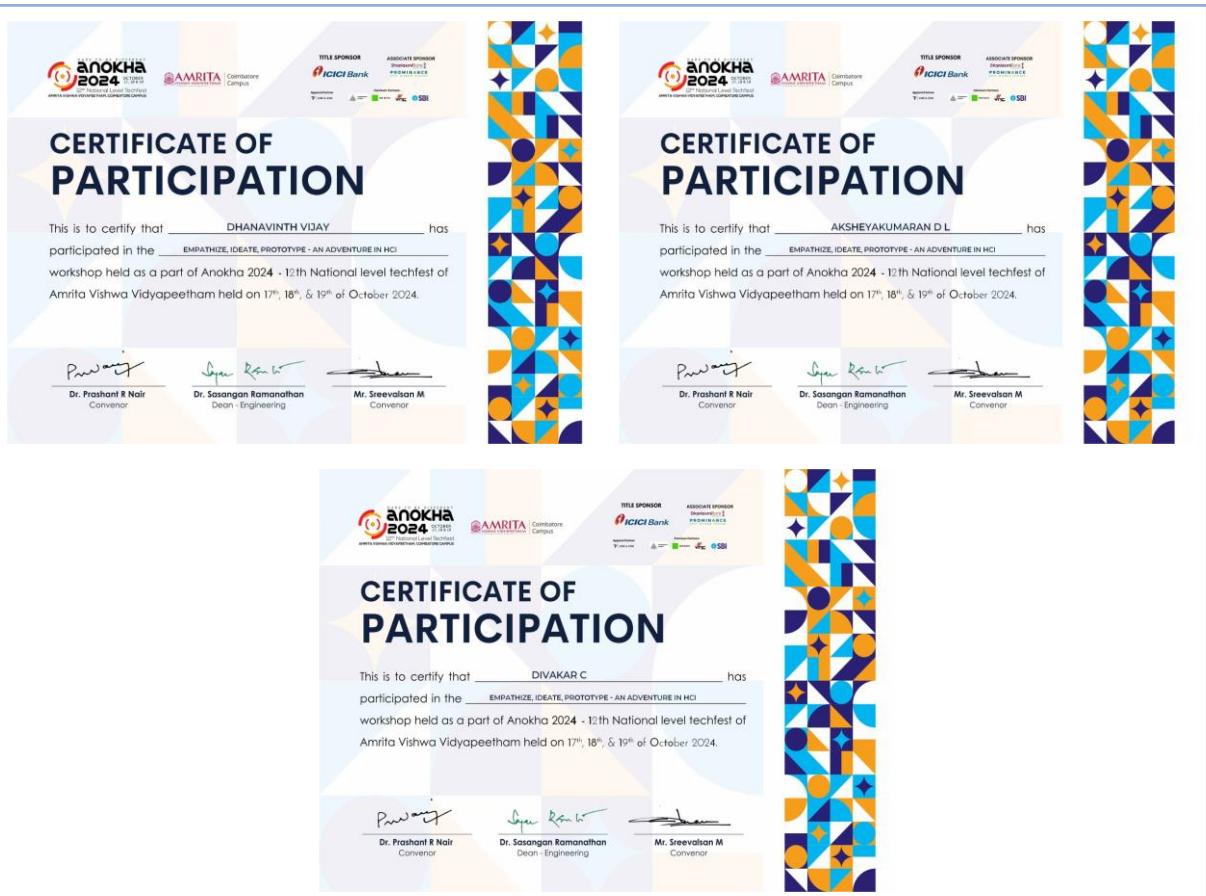




## ELECTRONICS AND COMMUNICATION ENGINEERING

### Students' Participation

Mr C Divakar, Mr D L Aksheyakumaran and Mr S Dhanavinth Vijay, Students of First B.E. ECE, participated in a workshop on “Empathize, Ideate, Prototype - an Adventure In HCI” organised by Amirta Vishwa Vidyapeetham, Coimbatore on 18 October 2024.



## ELECTRONICS AND COMMUNICATION ENGINEERING

### Faculty Participation

**Dr K Bagyalakshmi**, Asst. Professor, attended an FDP on **“Block Chain Technology Innovations and Applications”** organised by Datta Meghe College of Engineering during 09–15 October 2024.

**Mr M Arun Kumar**, Asst. Professor, attended an FDP on **“Exploring Transformative Applications of Artificial Intelligence: Innovation in Biomedical Engineering”** organised by Sri Ramakrishna Engineering College, Coimbatore during 14-18 October 2024.





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## ELECTRONICS AND COMMUNICATION ENGINEERING

### Faculty Participation

**Mr G Santhakumar**, Asst. Professor, attended a workshop on **“Advanced Artificial Intelligence and Global Optimization Techniques for Antenna Modeling and Design”** organised by NIT Silchar on 22 October 2024.



Date: 22 October 2024

Time (IST): 9.30 PM onwards

**One-Day Hybrid Workshop on Advanced Artificial Intelligence and Global Optimization Techniques for Antenna Modeling and Design (AMD-2024)**

### CERTIFICATE OF PARTICIPATION

to

**Prof. Santhakumar G, Sri Krishna College of Technology**

for attending One-Day Hybrid Workshop on Advanced Artificial Intelligence and Global Optimization Techniques for Antenna Modeling and Design (AMD-2024), delivered by Prof. Ahmed Hoorfar, Villanova University, USA and Dr. Taimoor Khan, NIT Silchar on 22 October 2024.

Dr. Ujjal Chakraborty  
Coordinator

Dr. Gaurav Singh Baghel  
Coordinator

Jointly organized by *IEEE APS Joint Section Chapter-Silchar, IEEE MTT-S Student branch Chapter @ NIT Silchar* and *IEEE Silchar Subsection* in Association with *Department of Electronics and Communication Engineering, National Institute of Technology Silchar*



## ELECTRICAL AND ELECTRONICS ENGINEERING

### Faculty Participation

Dr Abinaya, Asst. Professor, participated in “**Socio Innovation Summit 2024**” organised by Sri Ramakrishna Arts and Science College, Coimbatore on 26 October 2024.



## ELECTRICAL AND ELECTRONICS ENGINEERING

### Faculty Publication

**Mr Bharaniprakash T**, Asst. Professor, published a research article on “**Performance Analysis of Fifteen Level Reduced Device Count Asymmetrical Multi Level Inverter**” in an International Journal of Power Electronics and Drive System, Volume no 15, Issue no 4, 2024 with an impact factor of 1.58.

**International Journal of Power Electronics and Drive Systems (IJPEDS)**

Vol. 15, No. 4, December 2024, pp. 2243~2252

ISSN: 2088-8694, DOI: 10.11591/ijpeds.v15.i4.pp2243-2252

□ 2243

### **Performance analysis of fifteen level reduced device count asymmetrical multilevel inverter**

**Murugesan Manivel<sup>1</sup>, Lakshmanan Palani<sup>2</sup>, Sivaranjani Subramani<sup>3</sup>, Bharani Prakash Thiagarajan<sup>4</sup>, Divya Kannusamy<sup>1</sup>, Jebakumar Immanuel Devasahayam<sup>5</sup>, V. J. Vijayalakshmi<sup>6</sup>**

<sup>1</sup>Department of Electrical and Electronics Engineering, Karpagam Institute of Technology, Coimbatore, Tamil Nadu, India

<sup>2</sup>Department of Electrical and Electronics Engineering, Rajagiri School of Engineering & Technology, Kakkannad, India

<sup>3</sup>Department of Electrical and Electronics Engineering, Sri Krishna College of Engineering and Technology, Coimbatore, India

<sup>4</sup>Department of Electrical and Electronics Engineering, Sri Krishna College of Technology, Coimbatore, India

<sup>5</sup>Department of Artificial Intelligence and Data Science, Karpagam Institute of Technology, Tamil Nadu, India

<sup>6</sup>Department of Electrical and Electronics Engineering, Karpagam Academy of Higher Education, Coimbatore, India

#### **Article Info**

##### **Article history:**

Received Dec 20, 2023

Revised May 27, 2024

Accepted Jun 2, 2024

#### **ABSTRACT**

In this article, a fifteen-level reduced device count asymmetrical multilevel inverter is introduced for electric vehicle applications. This novel multilevel inverter topology minimizes the power switches required. Control of the proposed inverter is accomplished via the nearest-level control method. In a typical multilevel inverter, ten to twelve switches are used to create the fifteen levels. A high number of switches are used in traditional multilevel inverters,

## ELECTRICAL AND ELECTRONICS ENGINEERING

### Faculty Publication

**Dr Jency Joseph J**, Assoc. Professor, published a research article on “**Forecasting Hourly Short Term Solar Photovoltaic Power using Machine Learning Models**” in an International Journal of Power Electronics and Drive System, Volume no 15, Issue no 4, 2024 with an impact factor of 1.58.

#### International Journal of Power Electronics and Drive Systems (IJPEDS)

Vol. 15, No. 4, December 2024, pp. 2553~2569

ISSN: 2088-8694, DOI: 10.11591/ijpeds.v15.i4.pp2553-2569

□ 2553

### Forecasting hourly short-term solar photovoltaic power using machine learning models

**Sravankumar Jogunuri<sup>1,2</sup>, F. T. Josh<sup>1</sup>, J. Jency Joseph<sup>3</sup>, R. Meenal<sup>4</sup>, R. Mohan Das<sup>5</sup>, S. Kannadhasan<sup>6</sup>**

<sup>1</sup>Division of Electrical and Electronics Engineering, Karunya Institute of Technology and Sciences, Coimbatore, India

<sup>2</sup>Department of Renewable Energy Engineering, College of Agricultural Engineering and Technology, Anand Agricultural University, Gujarat, India

<sup>3</sup>Department of Electrical and Electronics Engineering, Sri Krishna College of Technology, Coimbatore, India

<sup>4</sup>Department of Electrical and Electronics Engineering, V.S.B Engineering College, Karur, India

<sup>5</sup>Department of Electrical and Electronics Engineering, New Horizon College of Engineering, Bengaluru, India

<sup>6</sup>Department of Electronics and Communication Engineering, Study World College of Engineering, Coimbatore, India

#### Article Info

##### Article history:

Received Dec 18, 2023

Revised May 22, 2024

Accepted Jun 2, 2024

#### ABSTRACT

Forecasting solar photovoltaic power ensures a stable and dependable power grid. Given its dependence on stochastic weather conditions, predicting solar photovoltaic power accurately demands applying intelligent and sophisticated techniques capable of handling its inherent nonlinearity and volatility. Controlling electrical energy sources is an important strategy for reaching this energy balance because grid operators often have no control over use patterns. Accurately forecasting photovoltaic (PV) power generation from highly



## ELECTRICAL AND ELECTRONICS ENGINEERING

### Students' Participation

**Mr Ravi Prasath P, Mr Shajahan M, Mr Ragavan K S, Mr Praveen S R, Mr Prithiviraj V and Mr Pearsun Ashby,** Students of Second B.E. EEE, participated in “TATHVA’24” organised by NIT Calicut on 27 October 2024.



## ELECTRICAL AND ELECTRONICS ENGINEERING

### Student Participation

**Ms Deva Dharshini**, Student of Second B.E. EEE, secured the Second Place in **"Table Tennis - Anna University Sports Board Chennai Zone 10 Tournament"** organised by Hindustan College of Engineering and Technology, Coimbatore on 22 October 2024.





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## ELECTRICAL AND ELECTRONICS ENGINEERING

### Event Organised

The Dept. of EEE conducted an “**Academic Review Meeting**” for the Students of First B.E. EEE and their parents on 29 October 2024.





## INFORMATION TECHNOLOGY

### Student Achievement

**Ms Deepika T**, Student of Second B.Tech. IT., bagged the **Second Prize** in **EBG Socio Innovation Summit 2024** organised with the theme of "Empowering Women Empowering Society" on 26 October 2024. The team received **Rs. 15000/-** to implement the proposed project on "Kriti Sakthi - An AI-powered Integrated Platform for SHG Farmers."



## INFORMATION TECHNOLOGY

### Faculty Participation

**Ms P Manohari**, Asst. Professor, completed the Short-term Programme on “**Advanced Pedagogy**” under MM - TTP of UGC organised by CIT during 23-28 October 2024.





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## INFORMATION TECHNOLOGY

### Faculty Participation

Ms S Saranya, Asst. Professor, completed the course on “Decision Trees using Python” through Infosys Springboard.



COURSE COMPLETION CERTIFICATE

The certificate is awarded to  
**saranya sandhanam**  
 for successfully completing the course  
**Decision Trees using Python**  
 on July 29, 2024



Infosys | Springboard

*Congratulations! You make us proud!*

  
 Thirumala Arohi  
 Executive Vice President and Global Head  
 Education, Training & Assessment (ETA)  
 Infosys Limited

Issued on: Monday, July 29, 2024  
 To verify, scan the QR code at <https://verify.onwingspan.com>



## INFORMATION TECHNOLOGY

### Student Certification

**Ms S Yamuna**, Student of Second B.Tech. IT, completed the following courses through Infosys Springboard:

- Unix Linux OS - Unix Commands and Processes.
- Java Foundation Certification
- Java OOPs Concepts
- C++: Working with Associative Containers & Algorithms
- C++17 STL Solutions
- CSS3
- React Web Developer Certification
- Figma Training 2022



## INFORMATION TECHNOLOGY

### Student Certification

**Mr Sharukesh D**, Student of Second B.Tech. IT, completed the following courses through Coursera:

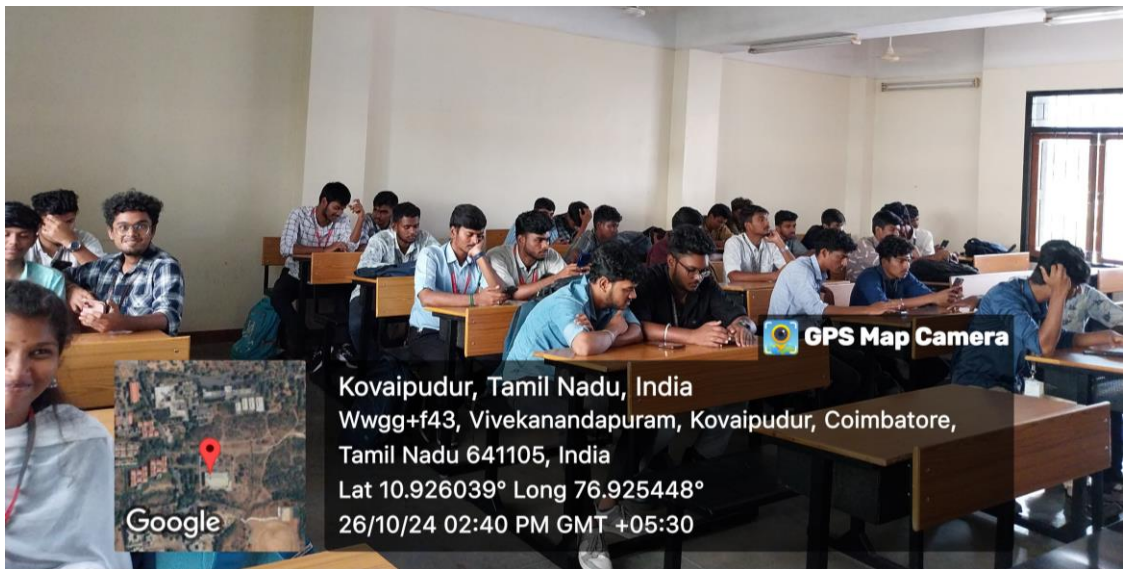
- Data Science Math Skills
- Differential Equations for Engineers
- Linear Algebra: Matrix Algebra, Determinants, & Eigenvectors
- Matrix Algebra for Engineers
- Principal Component Analysis with NumPy



## MECHANICAL ENGINEERING

### Students' Participation

The Students of Second B.E. Mechanical Engineering attended a webinar organised by Indian Institute of Foundryman.





## MECHANICAL ENGINEERING

### Event

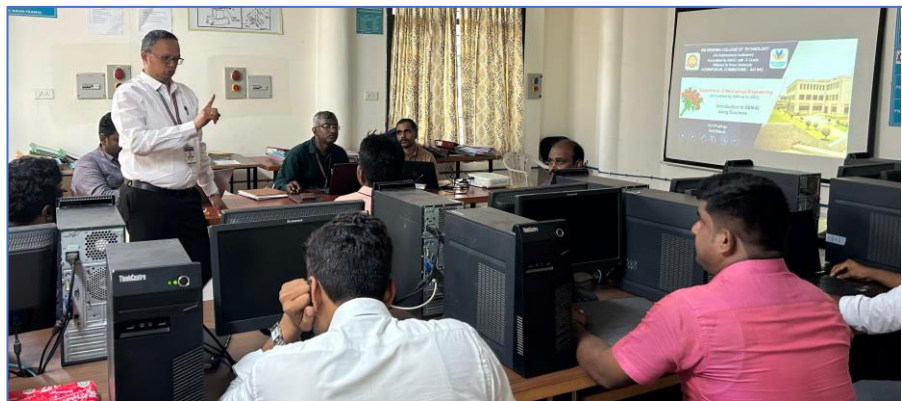
**Ms B Kayalvizhi**, Asst. Director, MSME DFO, Coimbatore done a physical verification of two **“MSME Idea Hackathon Projects”** carried out by the Dept. of Mechanical Engineering, Sri Krishna College of Technology, Coimbatore.



## MECHANICAL ENGINEERING

### Faculty Participation

The Members of Faculty from the Dept. of Mechanical Engineering attended a Hands-on Training Session on **“Generative AI, offering a practical overview of its Principles, Current Applications and Future Potential”** presented by Dr P Prathap, Dr R B Jeen Robert, Professors, Dept. of Mechanical Engineering.



## SCIENCE AND HUMANITIES

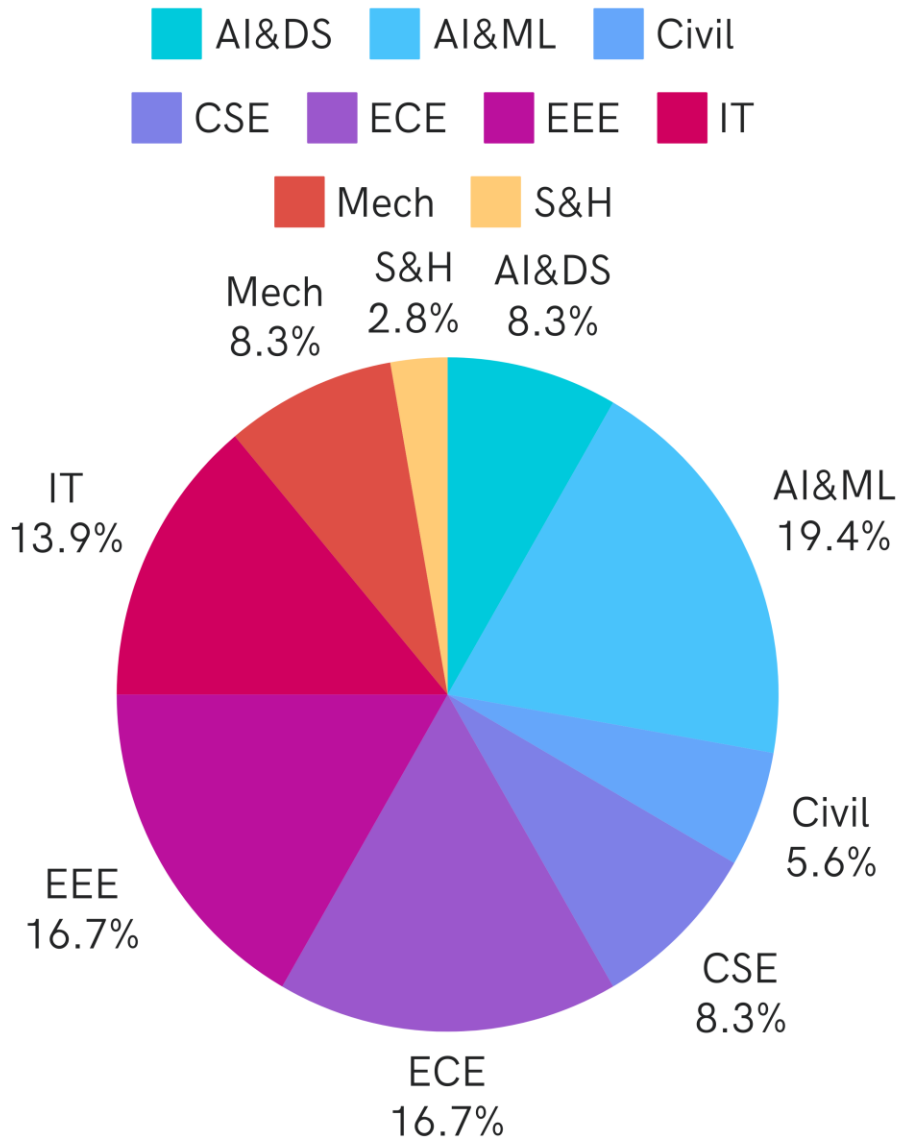
### Faculty Participation

**Dr B Kogilavani and Ms P Jinsha**, Asst. Professors, participated in a One-week International Virtual Workshop on **“Excellence in Research Methodology”** organised by the Dept. of English and other Foreign Languages, Faculty of Science and Humanities, SRM Institute of Science and Technology, Ramapuram, Chennai during 23-28 October 2024.





## CONTENT CONTRIBUTIONS BY THE DEPARTMENTS



## CHIEF EDITOR

**Dr M G Sumithra**  
Principal

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Assistant Professor  
Mechanical Engineering

**Ms B Pavithra**  
Assistant Professor  
English

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- Dr K Vimala, AP/AI&DS
- Ms A Gomathy, AP/CSE
- Ms K Mythili, AP/IT
- Mr K M Manoj, AP/Civil

- Mr G Santhakumar, AP/ECE
- Mr Ajith B Singh, AP/EEE
- Mr K Senthil Kumar, AP/Mech
- Ms S Jaya Preethi, AP/MBA
- Dr B Kogilavani, AP/English

## STUDENT EDITORS

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**Mr R Yashwanthraja**  
III B.E. Mechanical Engineering

**Mr S Nithin**  
II B.E. CSE (AIML)



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