



**S.A. ENGINEERING COLLEGE**

(Autonomous - Institute Level Research Centre, Affiliated to Anna University, Chennai)

Accredited by NAAC 'A' Grade & ISO 9001:2015 Certified Institution



**2024-2025 (ODD)**

# NEWSLETTER



## COMPUTER SCIENCE AND ENGINEERING

### MISSION

**1. Educational Excellence:**

To provide a transformative learning experience that integrates theory with practical skills, fostering creativity, critical thinking, and lifelong learning in Computer Science and Engineering.

**2. Innovative Research:**

To promote research and interdisciplinary collaboration, addressing contemporary challenges in technology and society.

**3. Sustainable and Ethical Practices:**

To facilitate the development of sustainable technological solutions with ethical practices that positively impact the environment and society.

**4. Industry and Society:**

To build partnerships with industry and stakeholders, enhancing the employability and entrepreneurial spirit of students, while contributing to technological and societal advancement.

### VISION

To pioneer in the emerging areas of Computer Science and Engineering education and research fostering innovation, ethical values sustainable technologies that advance the digital world and improve societal well-being.

**Dr.R.Geetha**  
Professor & HoD

### PROGRAMME EDUCATIONAL OBJECTIVES

**PEO 1:** Graduates shall have professional competency in the field of Computer Science and Engineering for pursuing higher education, research or as entrepreneurs.

**PEO 2:** Graduates shall work in a business environment with ethical standards, leadership qualities and communication necessary for engineering principles.

**PEO 3:** Graduates shall adapt to emerging technologies and respond to the challenges of the environment and society forever.

“

**"Knowledge is the compass that guides us through the wilderness of ignorance."**

**EDITOR IN CHIEF**

**Dr.R.Geetha**

**Mr.C.Balakrishnan**

**EDITORS**

**Dr.S.Sivakumar**

**Dr.M.Kavitha**

# INDUSTRIAL VISIT

 **S.A. ENGINEERING COLLEGE, CHENNAI-77**  
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 **DEPARTMENT OF  
COMPUTER SCIENCE AND ENGINEERING** 

ORGANIZES

**INDUSTRIAL VISIT**

TO

**INDIAN SPACE RESEARCH ORGANIZATION (ISRO)**

 IV YEAR C STUDENTS

HOSTED BY

The Group Director  
ISRO Satellite Centre,  
Old Airport Road,  
Bangalore

 13  
SEPT  
2024

044 26801999      www.saec.ac.in      saec@saec.ac.in



## Exposure to Satellite and Rocket Technology

- Observed detailed models and demonstrations of launch vehicles, satellites, and propulsion systems.
- Understood the engineering behind PSLV, GSLV, and satellite telemetry operations..

## Inspiration and Career Guidance

- Students received guidance on career opportunities in space research, aerospace, and allied sciences.



"Learning is the bridge between confusion and clarity, connecting us to our true potential."





## HANDS-ON EXPOSURE TO ADVANCED TECHNOLOGIES

- Visited live demonstration units showcasing CNC machines, collaborative robots (cobots), and digital twin systems.
- Learned how technologies like 3D printing, AR/VR, and smart sensors are used in modern manufacturing environments.
- Witnessed real-time monitoring and predictive maintenance systems that ensure operational excellence.

## SMART MANUFACTURING AND INDUSTRY 4.0

- Students were introduced to the concept of Industry 4.0, integrating automation, data exchange, and smart technologies in manufacturing.
- Explored how TANSAM is revolutionizing the manufacturing sector using IoT, AI, robotics, and advanced analytics.
- Understood the importance of digital transformation and smart systems in boosting industrial efficiency.



## ORIENTATION AND INDUSTRY COLLABORATION

- Gained insights into interdisciplinary academic programs and research opportunities offered at IITDM.

"Books are the ladders upon which we climb from the darkness of ignorance to the heights of understanding."

# GUEST LECTURE

- The Lecture was held on 02.08.2024.

## NATIONAL EDUCATION POLICY

- The guest lecture was organized by the Department of Computer Science and Engineering for the CSE students.
- To help them gain insights on how the policy will influence their academic and professional growth
- The Lecture was organized on 29.07.2024.



## EXPERIMENTING FORMAL LANGUAGES USING JFLAP

## RECENT TRENDS & OPPORTUNITIES

- The guest lecture was organized by the Department of Computer Science and Engineering for III Year students.
- Explains about the Emerging opportunities in the field of Data and Computer Communications



"The mind is like a parachute—it works best when open to the winds of learning."



- The guest session was hosted by the Department of Computer Science and Engineering for III Year CSE students.
- Demonstrations on utilizing JFLAP for automata theory and formal languages.
- The Lecture was organized on 02.08.2024.

## AN OVERVIEW ON CYBERSECURITY & PROMPT ENGINEERING



- The guest session was hosted by the Department of Computer Science and Engineering for III Year CSE students.
- An overview on Prompt Engineering , Cyber Security and its role in technologies and development.
- The Lecture was organized on 02.08.2024.

## AN OVERVIEW ON CYBERSECURITY & PROMPT ENGINEERING

- The guest lecture hosted by the Department of Computer Science and Engineering for students on 'Advanced Data Structure Concepts (Trees)'.
- The session aimed to strengthen students understanding of complex data structures, preparing them for future coursework and real-world problem-solving scenarios.
- The Lecture was organized on 02.08.2024.


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**DEPARTMENT OF  
COMPUTER SCIENCE AND ENGINEERING**


**ORGANIZES**  
**GUEST LECTURE**

**09  
OCT  
2024**

**Time: 11.00 to 12.30pm**

**ON**

**IT SEMINAR HALL**

**ADVANCED DATA STRUCTURE CONCEPTS (TREES)**









"Wisdom is the fruit that grows on the tree of education, nourished by curiosity and watered by experience."

## RESOURCE PROVISIONING USING ELASTIC SCALING FOR CLOUD COMPUTING



- The guest session was organized by the Department of Computer Science and Engineering for IV Year CSE students on the topic of 'Resource Provisioning Using Elastic Scaling for Cloud Computing'.
- Students learned how cloud resources automatically adjusted based on demand, ensuring optimal performance and efficient resource use in real-time.
- The Lecture was held on 10.10.2024



## ESSENTIALS OF THE CYBERSECURITY

- The guest session was hosted by the Department of Computer Science and Engineering for II Year CSE(Cyber Security) students on the topic of 'Essential of Cyber Security'.
- The Lecture was held on 10.10.2024



"Learning transforms the prisons of ignorance into palaces of possibility."





## EMERGING TRENDS IN DATA AND COMMUNICATION TECHNOLOGIES

- Enhanced mobile broadband enabling ultra-fast, low-latency communication for IoT and smart devices.
- Edge and Fog Computing: Moving data processing closer to the source, reducing delay and improving real-time performance.



## OPPORTUNITIES FOR RESEARCH & INNOVATION

- Rising demand for secure protocols and encryption methods in data exchange.
- AI-Powered Networks: Integration of artificial intelligence for self-optimizing and self-healing networks.



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**DEPARTMENT OF  
COMPUTER SCIENCE AND ENGINEERING**



organizes

**GUEST LECTURE**  
ON

**RECENT TRENDS AND OPPORTUNITIES IN DATA AND COMPUTER COMMUNICATIONS**

**Time:** 10:00 am - 12:00 pm  
**III YEAR STUDENTS**



**GUEST SPEAKER**  
**Shankar Soundararajan**  
Business Operations Manager  
Denodo Technologies India Private Ltd



02  
AUG  
2024

Venue: ECE seminar Hall

044 26801999      www.saec.ac.in      saec@saec.ac.in








## CAREER PATHWAYS AND INDUSTRY DEMAND

- High demand for professionals who design and manage scalable communication systems.

"The teacher lights the candle of curiosity; the student carries its flame forward."



## TECHNIQUES AND TOOLS FOR RESOURCE PROVISIONING



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**DEPARTMENT OF  
COMPUTER SCIENCE AND ENGINEERING**



ORGANIZES

**GUEST LECTURE**

ON

**RESOURCE PROVISIONING USING ELASTIC SCALING FOR CLOUD COMPUTING**

**Time:** 11.00 to 12.30pm

**Participants:** IV year CSE Students



**HOSTED BY**

**Muneeswaran P**  
Assistant Professor  
Department of Computer  
Science and Engineering  
NIT Calicut

**10  
OCT  
2024**

**ECE SEMINAR HALL**

044 26801999

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

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## UNDERSTANDING ELASTIC SCALING IN CLOUD COMPUTING

- Explained the concept of \*elastic scaling\*—the ability to dynamically allocate or deallocate resources based on workload demand.
- Discussed the difference between \*horizontal and vertical scaling\* and their real-time applications.
- Explored tools like \*AWS Auto Scaling, Microsoft Azure Autoscale, and Kubernetes HPA\* for implementing elasticity.
- Demonstrated \*scaling policies\*, thresholds, and automation strategies used in cloud resource management.
- Emphasized the importance of \*monitoring tools\* and analytics in maintaining system performance under fluctuating loads.



"In the world of constant change and information overload, the ability to learn quickly is the most important skill of all"



# WORKSHOP



## CYBERSECURITY POLICIES, STANDARDS, AND COMPLIANCE

### IEEE WORKSHOP

- Overview of latest cyberattack trends including ransomware, phishing, and zero-day exploits
- Analysis of vulnerabilities in IoT devices and smart infrastructure
- Case studies of recent high-profile cyberattacks and their impact
- Overview of international cybersecurity regulations and standards (e.g., GDPR, NIST)
- Best practices for organizational cybersecurity governance and risk management
- Challenges and strategies for ensuring compliance in diverse regulatory environments



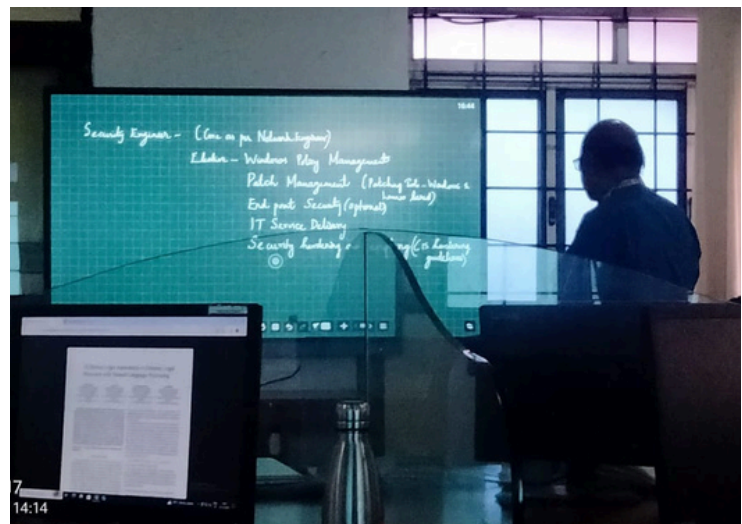
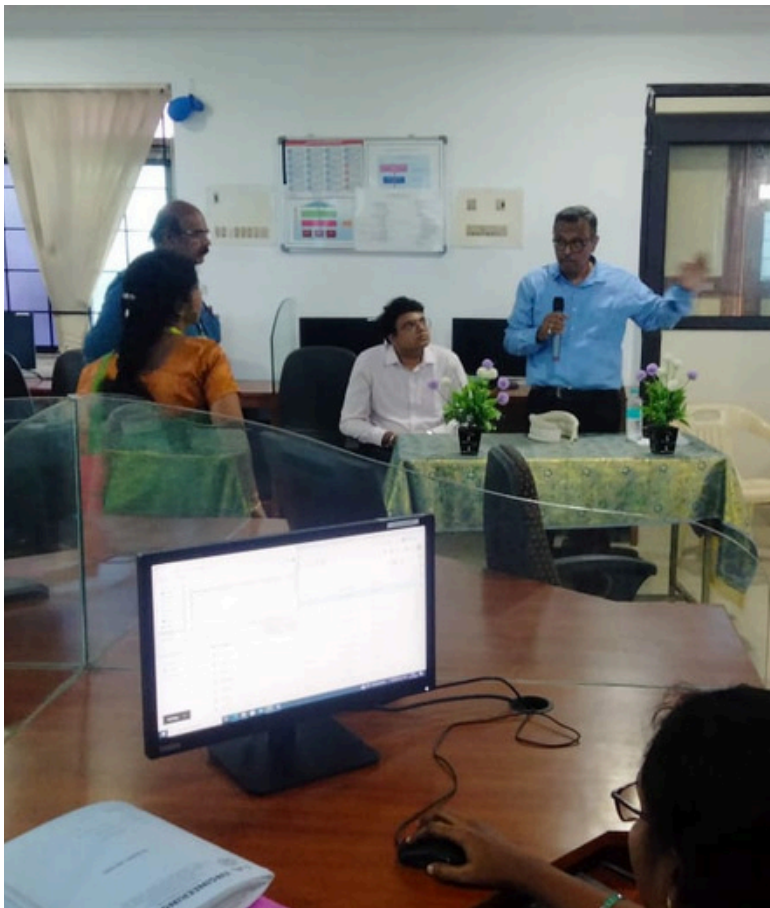
"What you learn today may be obsolete tomorrow; but the discipline to keep learning will always keep you relevant"

## WORKSHOP ON CURRICULUM DESIGN FOR CYBER SECURITY

- The workshop covered international cybersecurity regulations and standards like GDPR, which focuses on data privacy, and NIST, the widely adopted Cybersecurity Framework.
- Key strategies for risk management were covered, including risk assessments, mitigation techniques, and tools like firewalls and encryption to reduce cybersecurity risks.



- The curriculum included case studies, and simulations where students could apply their knowledge in controlled environments, simulating real-world attacks, risk management situations, and cybersecurity breaches. This hands-on experience is vital for bridging the gap between theoretical learning and actual implementation.



"Every experience, every person you meet, every mistake you make has something to teach you . if you're willing to stay open and keep learning"



# ONAM



## CULTURAL SIGNIFICANCE OF ONAM

- Onam is a major harvest festival celebrated in Kerala, symbolizing prosperity and gratitude.
- It commemorates the homecoming of the legendary King Mahabali

## TRADITIONAL CELEBRATIONS AND ACTIVITIES

- people decorate their homes with intricate floral designs called Pookalam and prepare a grand feast known as Onam Sadhya.



"Great education inspires not only competence in one's field, but also compassion, curiosity, and courage to serve something greater than oneself"

# HACKATHON



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**DEPARTMENT OF  
COMPUTER SCIENCE AND ENGINEERING**



ORGANIZES

**IEEE DAY 2024**

**09  
OCT  
2024**



#### SPECIAL EVENTS

1. Hackathon
2. Mind Masters
3. UI Design
4. Connections
5. Debugging

#### REGISTER HERE

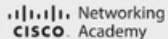


III YEAR CSE STUDENTS

044 26801999

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

[saec@saec.ac.in](mailto:saec@saec.ac.in)



## CELEBRATING INNOVATION THROUGH IEEE HACKATHON

## LEARNING OUTCOMES AND TECHNICAL EXPOSURE

- The IEEE Day Hackathon provided a platform for students to solve real-world problems using technology and teamwork.
- Participants worked on themes like smart cities, sustainability, IoT, and AI-driven solutions.
- Students enhanced their skills in full-stack development, API integration, and version control tools like Git and GitHub.
- Gained exposure to the hackathon culture, including pitching, demo sessions, and time-bound collaboration.

"Education should ignite curiosity, encourage questioning, and build the confidence to challenge the status quo and think independently"



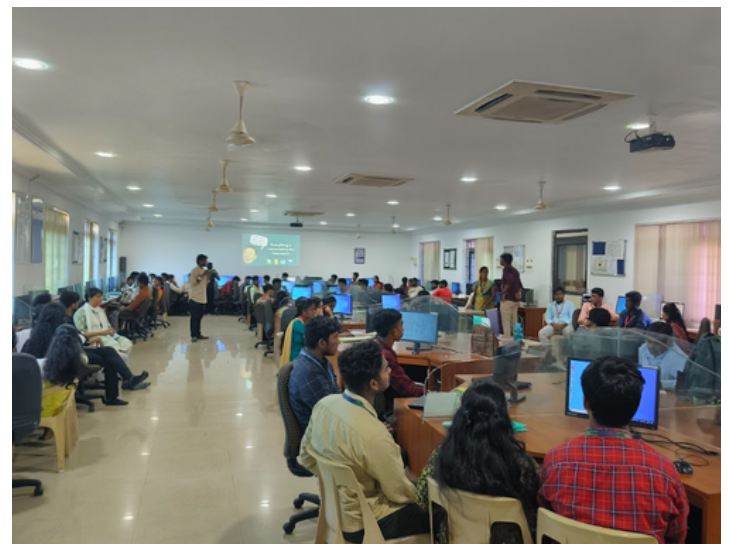


## ENCOURAGING INNOVATION AND TECHNICAL EXCELLENCE

- The event provided hands-on experience in programming, debugging, and rapid prototyping.
- Students gained exposure to cutting-edge technologies such as AI, IoT, cloud computing, and mobile development.

## SKILL DEVELOPMENT AND CAREER READINESS

- Enhanced participants' skills in project management, teamwork, and time-bound execution.
- The event opened up networking opportunities and increased awareness about career paths in tech innovation.



"In times of rapid change, learners inherit the earth, while the learned find themselves beautifully equipped to deal with a world that no longer exists"

# WORKSHOP FOR FACULTY

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 **DEPARTMENT OF  
COMPUTER SCIENCE AND ENGINEERING** 

**ORGANIZES**

**ONE DAY WORKSHOP**

**ON**

**IMPLEMENTATION OF OUTCOME BASED EDUCATION**  
(CO-PO Mapping, Blooms Mapping, Rubrics, Outcome Based Curriculum, Teaching-Learning & Assessment)

 **PARTICIPANTS: CSE FACULTY MEMBERS**

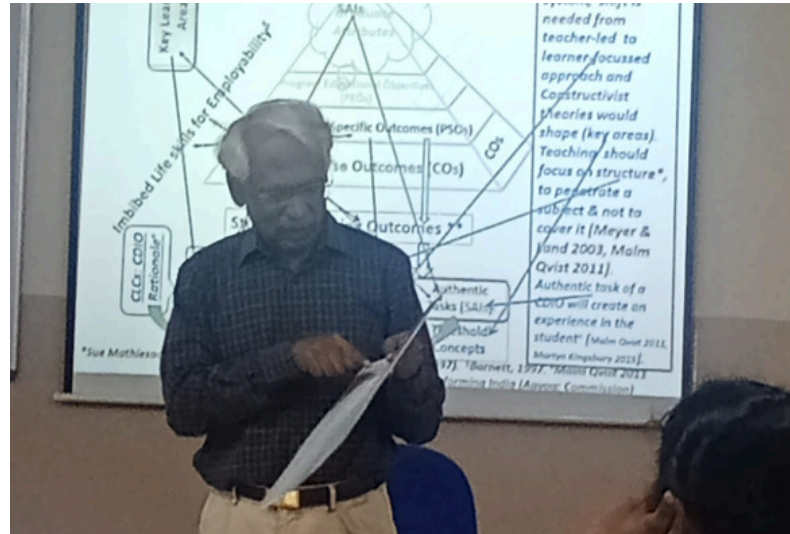
 **HOSTED BY,**  
**Prof. Dr. T. Gnana Sambanthan**  
Dept. of CSE NITTTR (SR), GoI  
(Ministry of Education),  
Taramani PO, Chennai-113

 **20  
JULY  
2024**

**Venue:** IoT LAB,  
CSE Department

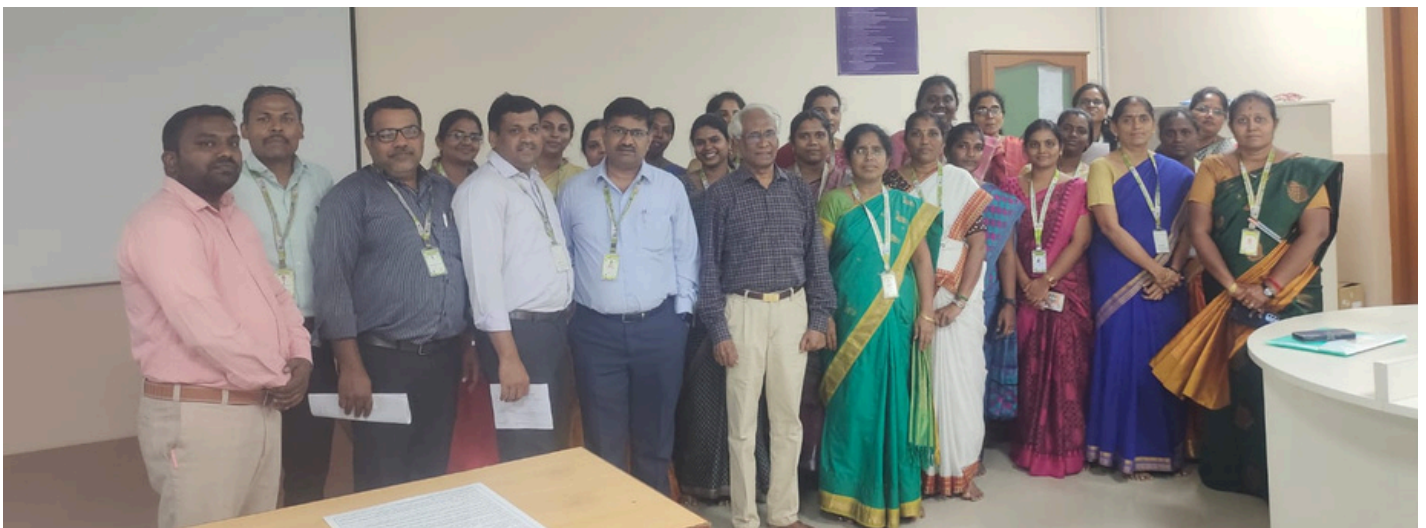
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## PRACTICAL APPROACHES AND IMPLEMENTATION STRATEGIES

- Introduced the core framework of OBE, focusing on student-centric learning outcomes and performance-based assessments.
- Demonstrated methods to design curriculum and assessments that measure specific learning outcomes effectively.



"Real education should challenge your comfort zone, stretch your thinking, and push you to be a better version of yourself every day"





## ALIGNMENT OF NEP WITH OUTCOME-BASED EDUCATION

- The National Education Policy (NEP) 2020 emphasizes learner-centric and skill-based education, in line with OBE principles.
- NEP promotes flexible curricula, multidisciplinary learning, and measurable learning outcomes, core to OBE.

## IMPLEMENTATION STRATEGIES AND CURRICULUM DESIGN

- Institutions are encouraged to design curriculum that maps outcomes to specific skills and competencies.

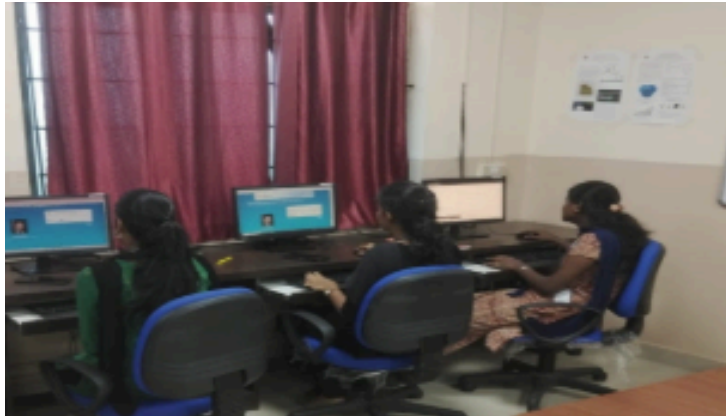


- Students benefit from personalized learning paths, clearer expectations, and focused skill development.

"The mark of an educated person is not how much they know, but how willing they are to keep learning, unlearning, and relearning."

# TECH TALK

## TECH TALK ON IEEE 802.11



- Explored emerging trends in no-code/low-code platforms that accelerate development of intelligent web and mobile applications.
- Demonstrated how AI and ML capabilities can be integrated seamlessly into apps without extensive coding knowledge.



- Introduced students to the fundamentals of ethical hacking and how cybersecurity plays a critical role in protecting digital systems.
- Explained the differences between white hat, black hat, and grey hat hackers, encouraging responsible and legal practices.

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 **DEPARTMENT OF  
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ORGANIZES

**TECHNICAL TALK**  
ON

**IOT DEVICE SECURITY CHALLENGES AND SOLUTION &  
REFERENCE MANAGEMENT TOOLS - MENDELEY**

**Time:** 2:00PM  
**Participants:** CSE FACULTIES

 **HOSTED BY**  
**Dr.Sivakumar.S**  
Topic: IOT DEVICE SECURITY  
CHALLENGES AND SOLUTION

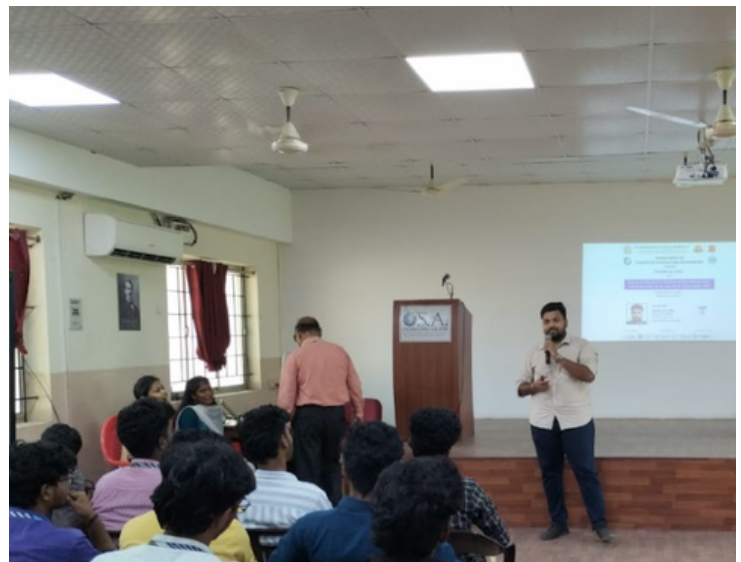
 **Dr.Anuradha.M**  
Topic: REFERENCE MANAGEMENT  
TOOLS - MENDELEY

 **03  
AUG  
2024**

**Venue:** IOT LABORATORY

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"The greatest value of education lies not in the facts remembered, but in the confidence and clarity it gives you to solve problems that don't yet exist"



# ACHIEVEMENTS



## VELAMMAL ENGINEERING COLLEGE BADMINTON (WINNERS)

- RESHMA R
- NIVEDITHA M

"The greatest value of education lies not in the facts remembered, but in the confidence and clarity it gives you to solve problems that don't yet exist"



## **GRT ENGINEERING COLLEGE - ATHLETIC OVERALL CHAMPIONSHIP**

- PREETHA DEVI P

## **GRT ENGINEERING COLLEGE - ATHLETIC - THIRD**

- NAREN V
- RAGHURAM
- ABHISHEK M

"Business opportunities are like buses; there's always another one coming.  
Education helps you recognize which one is worth taking."





## VELAMMAL INSTITUTE OF TECHNOLOGY- HOCKEY (WINNER)

- KARTHIKEYAN S V
- RAM SARAVANAN A
- BALAJI D
- HARI PRASAD V
- SRI RAMANENI BHARGAV V
- R.PRADEEP
- P SHAM KUMAR
- KISHORE S
- S GOWTHAM

"The best students are those who never stop being students, they approach every experience with curiosity and openness."



## VELAMMAL INSTITUTE OF TECHNOLOGY- FOOTBALL (RUNNER)

- L K PREM
- J FREDDY PAUL
- GANESH BHARATHI

"In the classroom, you learn lessons before the test; in life, you get the test first, and then you learn the lessons."





## S.A ENGINEERING COLLEGE-TENNIS (WINNERS)

- KARNESH E J
- ADHITHYA NITHIN R

"When you see every situation as a learning opportunity, you transform challenges into stepping stones for success."



## **RMK ENGINEERING COLLEGE- BASKET BALL (THIRD)**

- PREETHA DEVI P
- MADHUMITHA R

"Knowledge without action is potential; education becomes powerful only when it inspires you to make a real difference."





## **PRATHYUSHA ENGINEERING COLLEGE- BALL BADMINTON(MEN) WINNERS**

- NARAYANAN
- VIKRAM
- SATHISH KANNA
- L K PRABHA
- GIRIJA

"The true test of education is not what you remember, but how you think and act when faced with situations you've never encountered before."



## **PRATHYUSHA ENGINEERING COLLEGE- BALL BADMINTON(WOMEN) WINNERS**

- L K PRABHA
- GIRIJA

"An educated mind seeks not only to understand the world as it is, but to imagine the world as it could be."