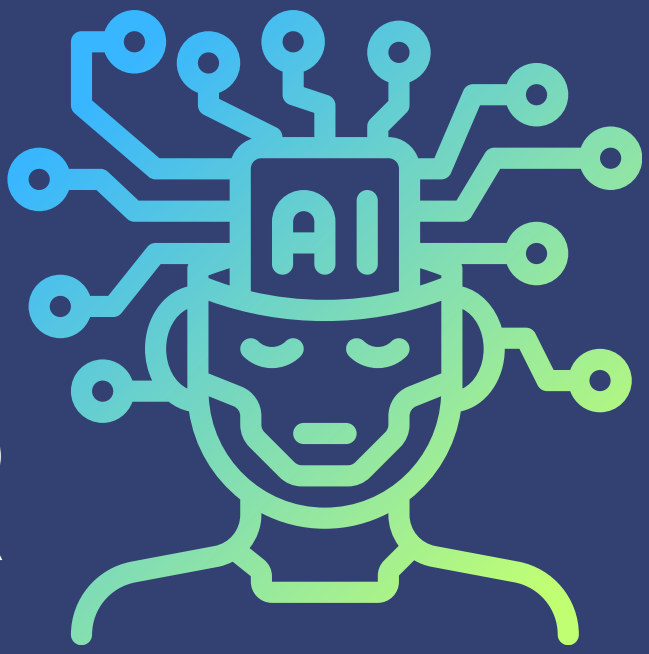
Vel Tech
Rangarajan Dr. Sagunthala
R&D Institute of Science and Technology
(Deemed to be University Estd. u/s 3 of UGC Act, 1956)

NEWS LETTER



Department of Computer Science and Engineering
School of Computing

July - Sep 2024
Volume 9 | Issue 3

VISION

To produce intellectual graduates who could contribute significantly in the analysis, design, development, operation and maintenance of complex software systems for meeting the ever changing requirements of service systems and to compete globally towards professional excellence.

MISSION

- **M1:** Design curricula for imparting training in adapting newer computing methods and technologies for providing effective and efficient solutions to the existing / new problems.
- **M2:** Emphasizing in-depth knowledge of the subjects by employing Information and Communication Technology (ICT) based pedagogy methods.
- **M3:** Creating a conducive research environment for making technological innovations by the faculty and students.
- **M4:** Providing leadership skills and professional ethics thereby making a prolific career in academics and industry.

PROGRAM EDUCATIONAL OBJECTIVES

- **PEO1:** The graduates of B.Tech Computer Science and Engineering will be able to formulate, solve and analyze Computer Science and Engineering problems using necessary mathematical, Scientific and engineering fundamentals.
- **PEO2:** The graduates of B.Tech Computer Science and Engineering will be able to demonstrate the impact of cutting-edge technologies to accomplish social and professional responsibilities.
- **PEO3:** The graduates of B.Tech Computer Science and Engineering will be able todemonstrate critical thinking, communication, teamwork, leadership skills and ethical behavior necessary to function productively and professionally.
- **PEO4:** The graduates of B.Tech Computer Science and Engineering will be able to pursue higher education at reputed institution in India and abroad, work in product development companies and engage in lifelong learning.

TECH PULSE

NEWS LETTER

WHAT'S INSIDE

About the Department

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July - Sep 2024
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ABOUT THE DEPARTMENT

The Department of Computer Science & Engineering (CSE) was established in the year 1997. The department has grown to current strength of 3051 students from a humble beginning with 250 students. The department is equipped with the latest state-of the art laboratories. The department has a dedicated team of faculty members with 19 Professors, 44 Associate Professors and 152 Assistant Professors among them 83 having doctoral degree. The students can become members of Computer Science of India (CSI), IEEE-CS, IEEE-PCS, IEEE-WIE, ACM & ISTE. The students have been placed with leading MNC's like Amazon, Cisco, Accenture, Capgemini, Virtusa, Wipro, ZOHO, KAAR technologies, TCS, Microsoft, Infosys, Cognizant, HP and Verizon. For further details: www.veltech.edu.in/cse.

Institution Headships

Col. Prof. Vel. Dr. R. Rangarajan

B.E. (Elec), B.E. (Mech), M.S. (Auto), D.Sc.,

Founder President & Chancellor

Dr. Sagunthala Rangarajan

M.B.B.S

Foundress President

Mrs. Rangarajan Mahalakshmi Kishore

B.Tech, M.Tech, MBA(UK),

Chairperson & Managing Trustee

Prof. Dr. Rajat Gupta

B.E, M.E, Ph.D

Founder President & Chancellor

Prof. Dr. S P. Chokkalingam

B.E, M.E, Ph.D

Dean - School of Computing

Achievements

Students

Heroes International Taekwondo Championship

Ajay A (VTU19378), a Computer Science and Engineering (CSE) student, achieved an impressive feat by winning the bronze medal at the prestigious ***Heroes International Taekwondo Championship*** held on August 2, 2024, in *Kulampur, Thailand*. The Heroes Cup is an internationally recognized competition that draws taekwondo practitioners from around the world, offering a platform for athletes to showcase their skills, discipline, and commitment to martial arts. Ajay's outstanding performance reflects his dedication and athletic prowess. Winning a medal at such a respected event is a significant accomplishment, underscoring Ajay's mastery and dedication to taekwondo on the global stage.

Project Mentor: Dr. M. Saravana Karthikeyan, TTS3575
Event Name: Heroes International Taekwondo Championship
Date of Event: 2nd August, 2024

Achievements

Students

INFOSYS SPRINGBOARD IDEATHON 2024

Kamalesh T (VTU21442), along with his fellow Computer Science and Engineering (CSE) students—**Sanjai A (VTU21510)**, **T Fabio Mugilan (VTU22423)**, **Ari Hara Sudhan V (VTU23457)**, and **Madhumita Kannan (VTU22364)**—achieved significant recognition by winning 1st prize in the Infosys Springboard Ideathon contest organized by Infosys Springboard in Bangalore. Infosys Springboard is an initiative designed to promote skill development and foster innovation among students and professionals.

Project Mentor: Dr G.Anurekha, Asst. Prof.-CSE(DS) ,TTS 3653
Title: BLOCKCHAIN AND VR INTEGRATION IN HYBRID WORK MODEL
Domain: Future of Hybrid Work
Date of Event: 23th August, 2024

Achievements

Students

DEUS EX MACHINA 2024

Tejashree TR (VTU21891), B. Jahnavi (VTU21889), and A.R. Jayanth (VTU21519), third-year students from the *Department of Artificial Intelligence and Data Science* (AI&DS), achieved an impressive milestone by securing 2nd place in the paper presentation contest at DMX 2K24. Their presentation focused on their research paper titled "Hyper-Personalized Product Recommendation System." The event, DMX 2K24, is a National Level Technical Symposium organized by the Department of Mechanical Engineering at Velammal Engineering College. This accomplishment showcases their innovative approach and understanding of advanced data science techniques in developing personalized solutions in the field of product recommendation.

Title: Hyper-Personalized Product Recommendation System
Date of Event: 31st August, 2024

Achievements

Students

Non-Technical Events

Music competition

Samuel Jimrys S (VTU20360),
Dhivyesh KN (VTU23167),
Dev Harris L (VTU19469),
Dev Harol L (VTU19468),
Chaitanya Kumar (VTU19303),
Danny Navis (VTU24361)

Organizer: Government Kilpauk Medical College (KMC)
Event: Battle of Bands
Prize: Rs.15000/-

Music competition

Organizer: Pondicherry Institute Of Medical College (PIMS)
Event: Battle of Bands
Prize: Rs.15000/-

Achievements

Students

Technical Fest

Hasna K H and Anoop Sachin K from CSE achieved a significant milestone by winning First Prize at the *AI-ZYPHER'24* fest, a technical event hosted by the Computer Science and Engineering (CSE) department at SRM Ramapuram. The fest, held on September 26 and 27, 2024, showcased innovation and creativity in the field of artificial intelligence and technology. During the event, participants engaged in a variety of activities, including workshops, hackathons, and competitions, allowing them to explore the latest advancements in AI and network with industry professionals. Her achievement not only highlights her individual capabilities but also contributes positively to her academic and extracurricular pursuits, reinforcing the vibrant technological community at SRM Ramapuram.

Event Name: AI-ZYPHER’24

Date of Event: 26th September 2024 and 27th September 2024.

Cash Prize: Rs. 750/-

Alumni Connect

Software Testing in Medical Devices

On *September 10, 2024*, an offline alumni session titled *"Software Testing in Medical Devices"* was held for 3rd-year CSE students, led by *Mr. Sundheep V.H.*, a 2013 VTU graduate and Lead Engineer at L&T, Chennai. The session, held in Block 33, Room 33139, offered insights into the essential role of software testing in the medical device industry, focusing on the challenges, standards, and methodologies critical for ensuring device safety and reliability. Mr. Sundheep began by introducing the students to the medical device sector's dependency on software for accurate and safe functionality, stressing that even minor software defects could pose significant patient risks. He explained the importance of risk-based testing to identify potential hazards and shared examples of risk scenarios where prioritization helps ensure safety. He also highlighted the efficiency gained from test automation in areas like regression and performance testing, which reduces human error and accelerates the testing process. Mr. Sundheep further discussed career prospects in medical device software testing, encouraging students to explore this rewarding field that combines technology with life-saving outcomes. A Q&A segment allowed students to delve into real-world challenges, tools, and techniques in software testing for medical devices, with Mr. Sundheep sharing personal insights and advice. The session provided a valuable perspective on regulatory standards, risk management, and testing methodologies in the medical device field, motivating students to consider careers in this specialized area.

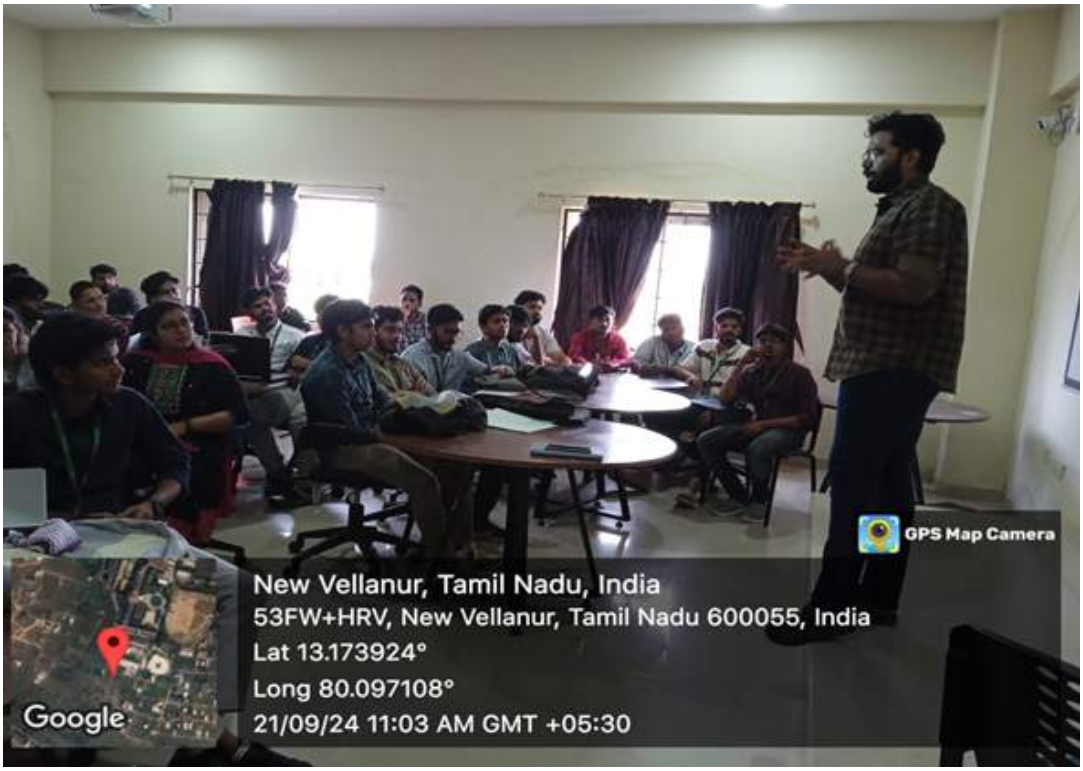
Alumni Connect

Mastering Java Basics: Understanding Core Concepts and Building Blocks

On *September 19, 2024*, an offline session titled "*Mastering Java Basics: Understanding Core Concepts and Building Blocks*" was conducted for 2nd-year CSE students by *Mr. Dhamodharan Ranganathan.* He is a 2009 VTU alumnus and the Director of Staminal Technologies Pvt. Ltd. The session aimed to deepen students understanding of Java, focusing on essential concepts that form the foundation of Java programming. Mr. Dhamodharan introduced Java as a versatile, object-oriented language crucial in enterprise applications and discussed its relevance compared to languages like Python and C++. He provided detailed explanations of control flow statements, including loops and conditional structures, to illustrate how they shape program execution. During the session, he guided students in solving basic Java problems, emphasizing the importance of writing clean, reusable code. Toward the end, Mr. Dhamodharan shared insights into career paths for aspiring Java developers, advising students to master core concepts before advancing to frameworks like Spring, Hibernate, and microservices. The session concluded with a Q&A segment, where Mr. Dhamodharan shared industry insights and personal experiences, motivating students to pursue excellence in Java and software development.

Alumni Connect

Transitioning From Engineering to Business Roles



On *September 21, 2024,* an offline alumni session titled "Transitioning From Engineering to Business Roles" was held for 3rd-year CSE students, featuring *Mr. Aravind,* a 2018 VTU alumnus and Senior Business Analyst at Aspire Systems, Bangalore. Conducted in Block 33, Room 33302, the session focused on guiding students through the shift from technical engineering roles to business-oriented positions, emphasizing the skills, mindset, and strategies essential for such a transition. Mr. Aravind shared his journey from software engineer to business analyst, explaining how his technical background in Computer Science laid the groundwork for understanding business operations. He discussed how his curiosity about solving business problems and understanding customer needs motivated his transition. The session highlighted the contrasts between engineering roles, which emphasize product development and technical problem-solving, and business roles, which demand strong communication, decision-making, and collaboration skills. Mr. Aravind advised students on the value of certifications like CBAP, PMP, and Agile for supporting a career shift and discussed how those with technical backgrounds bridge the gap between technical teams and business stakeholders. He explored long-term growth paths for business-oriented professionals from technical backgrounds, including roles like Product Director or CTO, where a blend of technical and business expertise is invaluable. The Q&A session addressed the practical challenges of transitioning, the potential benefits of an MBA, and tips for staying competitive. Mr. Aravind's insights into bridging technology and business, personal experiences and practical tips, offered students valuable perspectives on expanding career options beyond traditional engineering roles.

Alumni Connect

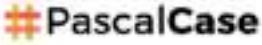
Emerging Trends in Telecommunication Networking Products

On *September 23, 2024*, an alumni session on "*Emerging Trends in Telecommunication Networking Products*" was held for 3rd-year CSE students, featuring *Ms. S. Akchaya*, a 2018 CSE graduate from VTU and Assistant Manager at VOIS, Bangalore. The session held offline in Block 33, Room 33301, provided students with insights into the latest advancements in telecommunications. Ms. Akchaya discussed the growing need for high-speed, reliable communication networks, the transformative impact of 5G, and the industry's challenges, including data management, cybersecurity, and continuous infrastructure upgrades. She highlighted key networking products like routers, switches, and wireless infrastructure critical for modern networks and encouraged students to consider careers in network architecture, SDN, NFV, and cybersecurity. Predicting trends like 5G expansion, cloud-native architectures, and sustainable networking, she inspired students with a forward-looking perspective on career paths and industry needs. The session was highly appreciated for its relevance and practical insights, enhancing students' understanding of telecommunication networking's future.

PLACEMENT ACTIVITIES 2024 – 2025

S. No	Company	Count	CTC
1	Zoho (Internship)	3	
2	Mu Sigma	14	5
3	CISCO	1	17.9
4	Infosys	1	9.5
5	ADP India	5	8.8
6	Trane Technologies	1	6
7	Sasken Technologies	1	5
8	Pascalcase	6	4
9	Amadeus Labs	1	12.6
10	Micromax	1	6
11	o2h Technology	1	12k /M

PLACEMENT ACTIVITIES 2024 – 2025



Appreciation

Faculty

Best Paper Award


IEEE

SRM

CERTIFICATE OF APPRECIATION

This is to certify that

Dr./Mr./Ms Kujani T from Vel Tech Rangarajan Dr.Sagunthala R&D Institute of Science and Technology has presented a paper titled Quantum Resnet18 for Classifying and Predicting the Maize Leaf Diseases, co-authored with - and won the BEST PAPER award in the 3rd International Conference on RECENT ADVANCES IN ELECTRICAL, ELECTRONICS, UBIQUITOUS COMMUNICATION AND COMPUTATIONAL INTELLIGENCE (RAEEUCCI - 2024), TECHNICALLY CO-SPONSORED BY THE IEEE, held from 17th & 18th April 2024, organized by the Department of Electronics and Communication Engineering, SRMIST, Kattankulathur, Tamil Nadu, India

OPTICA

Dr. Shanthi Prince
Conference Chair
HOD/ECE

Dr. Kujani T from Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology presented a paper titled "Quantum ResNet18 for Classifying and Predicting Maize Leaf Diseases" at the 3rd International Conference on Recent Advances in Electrical, Electronics, Ubiquitous Communication, and Computational Intelligence (RAEEUCCI-2024). This conference, organized by the Department of Electronics and Communication Engineering at SRM Institute of Science and Technology (SRMIST) in Kattankulathur, Tamil Nadu, India, took place on April 17-18, 2024. The event was technically co-sponsored by IEEE. Dr. Kujani's paper, co-authored with colleagues, received the **Best Paper Award** at the conference.

Appreciation

Faculty

Best Paper Presenter

Dr. T. Kujani from Vel Tech Rangarajan Dr. Sagunthala R&D Institute of Science and Technology was recognized as the **"Best Paper Presenter"** at the International Conference on Intelligent Algorithms for Computational Intelligence Systems (IACIS), organized by Navkis College of Engineering, Hassan (NCEH), Karnataka. This award was for the paper titled "Dermoscopic Skin Lesion Classification Using Color Features Based on Fine-Tuning of ResNet50 and DenseNet121 Transfer Learning Models". The conference, held on August 23-24, 2024, brought together experts to discuss advancements in computational intelligence. The award highlights Dr. Kujani's significant contributions to skin lesion classification research, showcasing innovative applications of transfer learning in dermatology.

Industry Higher Education

Game Development for Android

The course "10215CS910 - Game Development for Android" was conducted from July 22 to July 24, 2024, by *Dr. Jey Chelladurai* from East Stroudsburg University, USA. Dr. Chelladurai, an expert in fields like Biological Modeling, Graphics, Animation, and Virtual Reality, shared his extensive experience in teaching computer graphics and animation. The course covered fundamental concepts in Android game development, including setting up the development environment with Android Studio and Java, creating efficient game loops, implementing graphics and animations, handling user inputs such as touch events, integrating audio for sound effects and music, and optimizing performance for various devices. Participants were also encouraged to explore additional resources, such as the Android Developers website and platforms like Udemy, for further learning.

Industry Higher Education

Natural Language Processing

The course "10215CS921 - Natural Language Processing" was held from August 19 to 23, 2024, under the guidance of *Dr. Kasturi Dewi Varathan*, an Associate Professor at the University of Malaya. Dr. Varathan, known for her expertise in Data Analytics, Text Mining, and Information Retrieval, provided a comprehensive introduction to Natural Language Processing (NLP). The course covered key topics, including the fundamentals of NLP, text preprocessing techniques, language models, part-of-speech tagging, named entity recognition, sentiment analysis, and machine translation. Participants engaged in hands-on sessions to apply these concepts using industry-relevant tools and programming languages. For further exploration, resources like Stanford's CS224N course materials and the textbook "Speech and Language Processing" by Jurafsky and Martin were suggested to deepen understanding of NLP concepts and applications.

Industry Higher Education

Vehicular and Mobile Networks

The course "10215CS932 - Vehicular and Mobile Networks" was held from August 22 to 24, 2024, and was led by *Dr. Lamia Chaari Fourat*i, a Professor at the Computer Science and Multimedia Higher Institute (ISIMS) of Sfax University, Tunisia. Dr. Chaari Fourati, known for her expertise in network technologies, energy-efficient systems, and environmental monitoring, provided an in-depth exploration of vehicular and mobile networks. The course covered topics such as the fundamentals of vehicle-to-everything (V2X) communication, the integration of communication systems in connected and automated vehicles, network protocols and architectures, Quality of Service (QoS) mechanisms, and security and privacy concerns in vehicular communication systems. Participants engaged in practical sessions, utilizing simulation tools to analyze and enhance the performance of vehicular networks. The course also emphasized recent advancements and research trends, equipping attendees with a thorough understanding of the current state and future directions in the field of vehicular and mobile networks.

Industry Higher Education

Introduction to Symbolic and Connectionist AI

The course "10215CS935 - Introduction to Symbolic and Connectionist AI" was held from September 16 to 20, 2024, and was led by *Dr. Marco Castellani*, a Senior Lecturer in Mechanical Engineering at the University of Birmingham, UK. Dr. Castellani, known for his interdisciplinary research in engineering, biology, and computer science, provided an insightful overview of two key AI paradigms: Symbolic AI and Connectionist AI. The course covered the theoretical foundations of Symbolic AI, which uses logic and symbols for reasoning and problem-solving, and Connectionist AI, which models intelligence through neural networks that mimic the human brain's structure. Participants engaged in practical sessions to apply these concepts to real-world problems, gaining hands-on experience in implementing AI solutions. The course highlighted the strengths and limitations of both approaches, offering a balanced perspective on their applications. For further learning, resources like "Artificial Intelligence: A Modern Approach" by Stuart Russell and Peter Norvig and online courses on platforms like Coursera and edX were recommended.

Department Activities

Two Days Workshop on

7 Habits of Successful Leaders

Resource Person: **Mr.Narasimha Rao. B**
Soft Skill Trainer,
Fincare Finance Bank, Chennai

Date of Event: 15.07.2024 and 16.07.2024

Objective: To provide participants with practical insights and actionable strategies based on the seven key habits that successful leaders embody, fostering personal and professional growth.

Outcome: Participants gained a deeper understanding of the essential habits of successful leaders, equipping them with the skills and mindset to enhance their leadership effectiveness and drive positive results within their organizations.

One Days Workshop on

Gen AI with Prompt Engineering

Resource Person: **Girish Karadalli**
Project manager, Agile coach in bosch
Bangalore

Date of Event: 19.07.2024

Objective: The workshop aims to provide a comprehensive learning experience, beginning with an introduction to Generative AI and its applications, followed by sessions designed to enhance written, verbal, and non-verbal communication skills.

Outcome: By the end of the workshop, participants had a solid foundational understanding of generative AI and its applications—the ability to craft effective resumes that showcase their skills and experiences.

One Day Seminar on

12 Steps Approach to Crack Programming Questions in Interview

Resource Person: **Mr Saravana Prabhu Subramaniyan**
SQC Specialist, KLA (Ex Amazon)
Co-Founder of Waren VM3 Inc, Coimbatore

Date of Event: 19.07.2024

Objective: To get the awareness of the strategies to approach the programming Interview questions and how to crack those interview questions.

Outcome: The students understood the steps and strategies to solve programming problems along with the eight pillars of programming language.

One Day Seminar on

Cyber Security after the Rise of AI

Resource Person: **Dr.Sibi Chakkaravarthy Sethuraman,**
Associate Professor & Research Head – AI
VIT-AP University, Andhra Pradesh

Date of Event: 19/07/2024

Objective: Aim to provide participants with a comprehensive understanding of the intersection between AI and cybersecurity.

Outcome: The outcomes of the seminar would equip participants with the knowledge, skills, and strategies needed to navigate the evolving cybersecurity landscape in the age of AI, fostering a proactive and informed approach to cybersecurity challenges and opportunities.

One Day Workshop on

Cloud Based Secure Data Deduplication: Challenges and Solutions

Resource Person: **Dr.Sibi Chakkaravarthy Sethuraman,**
Associate Professor & Research Head – AI
VIT-AP University, Andhra Pradesh

Date of Event: 26.7.2024

Objective: Aim to provide participants with a comprehensive understanding of the intersection between AI and cybersecurity.

Outcome: The outcomes of the seminar would equip participants with the knowledge, skills, and strategies needed to navigate the evolving cybersecurity landscape in the age of AI, fostering a proactive and informed approach to cybersecurity challenges and opportunities.

One Day Workshop on

Localization Techniques for IoT environment and Precision Systems

Resource Person: **Dr. R.Preeth**
Assistant Professor
Dept. of Computer Science and Engineering
Indian Institute of Information Technology Design and Manufacturing, Kancheepuram

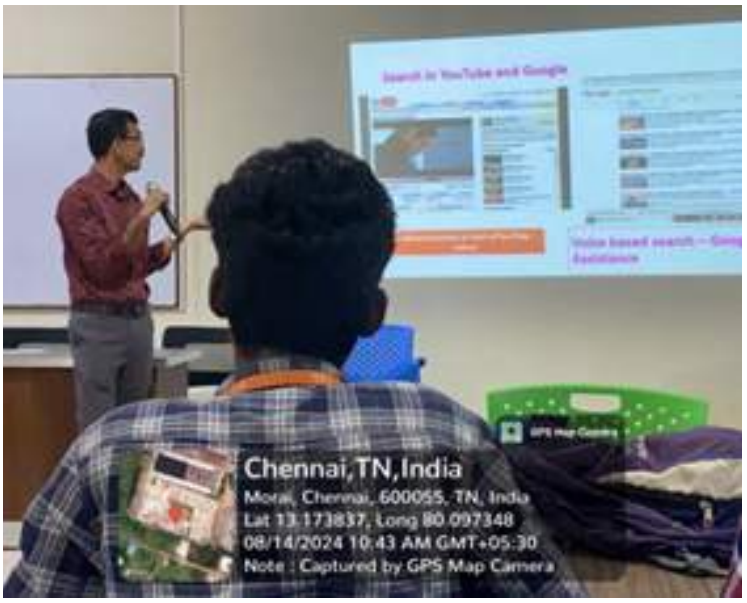
Date of Event: 30.07.2024

Objective: Localization in IoT environments and precision systems is crucial for applications ranging from asset tracking to autonomous vehicles.

Outcome: GPS and UWB offer high accuracy in outdoor and indoor environments respectively, making them suitable for precision applications like autonomous drones or robotics.

Hands-on Training

NoSql and MongoDB Databases



Resource Person: **Dr.A.Martin**
Professor, Department of CS
Central University of Tamil Nadu, Thiruvarur

Date of Event: 14.8.2024

Objective: To train participants in the practical use of NoSQL databases, with a focus on MongoDB, including data management, schema design, performance optimization, and security practices.

Outcome: Participants gain hands-on experience in MongoDB: by Performing CRUD operations and managing data effectively. Handling Real-World Data: Managing large datasets and distributed databases.

Hands-on Training

Business Intelligence Using Power BI

Resource Person: **Mr. S. Thamizhselvan**
Engineering Manager
Circana Inc, Pune

Date of Event: 09.08.2024

Objective: To enhance the operational practices with more strategic and business-oriented approaches used in Power BI with Hands-On Training.

Outcome: Students were able to convert unrelated sources of data into coherent, visually immersive, and interactive dashboards. Students experienced the use of tools like PowerBI Desktop and demo programs for Business Analysis Applications.

Awareness Programme on

CYBER CRIME

Resource Person: **Ms.Premila, Inspector of Police &**
Mr.Aravind Gnanan Baskaran

Date of Event: 06.08.2024

Objective: Individuals to protect personal data and devices. Businesses to safeguard sensitive information and maintain customer trust.

Outcome:

1. Career opportunities in cyber security and related fields.
2. Leadership roles in promoting cyber awareness and online safety.
3. Community engagement and education on cyber safety.
4. Development of innovative solutions to combat cyber-crimes.
5. Lifelong learning and adaptation to emerging cyber threats.

Technical Contest

AI POSTER STER MAKING CONTEST

Date of Event: 12.08.2024

Objective: To encourage creativity and innovation in visualizing AI concepts and ideas.To provide a platform for participants to showcase their understanding of AI and its applications.

Outcome: Increase awareness and understanding of AI concepts, applications, and benefits among participants, viewers, and the wider community. Spark inspiration and creativity in participants and viewers, encouraging them to explore AI and its potential.

Prize/Winner:

First Prize: **S.MONISH (VTU19950) & M.SAI CHARAN (VTU20261)**

Second Prize: **KK.SOMNATH (VTU24560)& S.KISHORE (VTU24452)**

Third Prize: **ALTAF SARWAR (VTU23782) & SAIHARUN (VTU22147)**

Technical Contest

CHATTY CATERPILLAR CHALLENGE

Date of Event: 13.08.2024

Objective: To equip them with essential skills such as communication, critical thinking, teamwork, and leadership, which are invaluable for their personal and professional development.

Outcome: Participants demonstrated improved communication skills through articulate expression of ideas and opinions. Critical thinking abilities were evident as participants analyzed diverse perspectives and formulated well-reasoned arguments.

Prize/Winner:

First Prize: **VTU 22302 - M. Akhil Kumar Reddy (Rs. 5000/-)**

Second Prize: **VTU 21891 - R. Tejashree (Rs. 3000/-)**

Third Prize: **VTU 23909 - Anoop Sachin. K (Rs. 1000/-) &**
VTU 22611 - Jaya Soorya (Rs. 1000/-)

Technical Contest

Project Idea Contest 2024

Date of Event: 03.09.2024

Objective: To encourage participants to devise innovative hardware and software solutions that address real-world problems, aligned with India's national development priorities in health, agriculture, education, and sustainability.

Outcome: Students enhance their technical, collaboration, and critical thinking skills, preparing them for future industry or research roles.

Hands on Workshop

Building Smart Applications using IOT

Resource Person: **Mr.A.Kesavan,**
CEO, Quantanics Techserv Pvt Ltd
Madurai

Date of Event: 03/09/2024

Objective: The objective of a hands-on workshop focused on building smart applications using IoT is to provide participants with a practical understanding of designing and deploying IoT-enabled solutions.

Outcome: Participants gained hands-on experience with IoT hardware (sensors, microcontrollers, communication modules.

Hands on Workshop on

REINFORCEMENT LEARNING

Resource Person: **Dr.V.MAHENDRAN**
Assistant Professor
IIT Tirupati.

Date of Event: 06/09/2024

Objective: To Enlighten the students about the uses of Reinforcement Learning in Hands-On Training.

Outcome: Students were able to understand, the uses of Reinforcement Learning used in industry effectively.

Faculty Development Programme on

PALO ALTO CLOUD SECURITY FUNDAMENTALS

Resource Person: **Mr. SIVA GOPAL K**
Technical Trainer – Training and Development,
ICT Academy, Tamil Nadu.

Date of Event: 09.09.2024 to 13.09.2024

Objective: To initially set up and configure containers on a docker bridge network and test the container security through the use of vulnerability scans and reports.

Outcome: Identify cloud native security including Kubernetes security, DevOps, and DevSecOps, and visibility, governance, and compliance challenges.

Workshop on

Personal Development for Engineers

Resource Person: **Ms. Rita Glades Mary**
Senior Manager HR and L&D Lead
Synergy Maritime Pvt. Ltd.
Chennai.

Date of Event: 04.09.2024

Objective: To empower engineers with essential personal and professional development skills that enhance their technical expertise and foster holistic growth.

Outcome: Attendees will identify and develop key leadership traits, preparing them to take on greater responsibilities and lead teams confidently.

Workshop on

ARTIFICIAL INTELLIGENCE IN BIOINFORMATICS FOR PROTEIN STRUCTURE REDUCTION

Resource Person: **Dr. Sanjay S. Bankapur**
Assistant Professor
National Institute of Technology
Karaikal, Pondicherry.

Date of Event: 06.09.2024

Objective: To understand Artificial Intelligence in Bioinformatics for protein structure reduction which is the combination of Artificial intelligence (AI) technologies with the BioInformatics infrastructure.

Outcome: The students are able to understand the basic concepts of AI in Bioinformatics techniques and its importance.

Invited Talk on

IMPLICATIONS AND INTEGRATION OF ARTIFICIAL INTELLIGENCE AND INTERNET OF THINGS IN HEALTHCARE APPLICATIONS

Resource Person: **Dr. P. Kumaran,**
Assistant Professor
National Institute of Technology
Karaikal, Pondicherry.

Date of Event: 06.09.2024

Objective: To Enlighten the students about the various novelties used in healthcare applications.

Outcome: Students effectively understood the latest technologies used in the healthcare sector. They experienced the use of IoT sensors in the healthcare applications. Students were also made aware of “AIoT in healthcare.”

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Hands-on Workshop in

Blockchain Technology using Remix and Ganache

Resource Person: **Mrs. Vijayalakshmi**
Senior Developer Advocate
Open Weaver India Private Ltd.,
Chennai.

Date of Event: 20.09.2024

Objective: The objective of this workshop is to provide participants with a practical understanding of Blockchain technology by developing smart contracts and deploying them using Remix IDE and Ganache.

Outcome: Gain practical experience in writing, testing, and deploying smart contracts using Solidity programming language in Remix IDE.

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Guest Lecture on

RECENT TRENDS IN ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

Resource Person: **Dr. A. Kannan,**
Former Professor & Head,
Dept. of Information Science and Technology,
CEG Campus, Anna University, Chennai.

Date of Event: 26.09.2024

Objective: To familiarize students with the fundamental concepts of Artificial Intelligence (AI) and Machine Learning (ML) principles.

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Outcome: Students now understand the core principles and foundational concepts of AI and machine learning.

Technical Contest

INNOVATE TO ELEVATE: EMPOWERING NEW INDIA

Date of Event: 26.09.2024

Objective: To encourage students to develop creative and innovative solutions to address key challenges in India across sectors such as education, healthcare, agriculture, disaster management and women safety.

Outcome:

- Increased innovative and problem solving skills
- Showcase of Innovative Ideas for National Growth.
- Continuous improvement through constructive feedback.
- Enhanced confidence in critical thinking and Q&A handling.

Research Publications

July - September 2024

We are excited to share that our faculty members have recently published their research articles in prestigious journals with high impact factors. This achievement highlights our department's strong success in the field of research.

Web of Science	54
Scopus Index	83
International Conferences	157
Patents	25

PROGRAM OUTCOMES

- **PO1** Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- **PO2** 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.
- **PO3** Design/development of solutions: 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.
- **PO4** 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 provide valid conclusions.
- **PO5** 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.
- **PO6** 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.
- **PO7** 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.
- **PO8** Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- **PO9** Individual and teamwork: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- **PO10** 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.
- **PO11** 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.
- **PO12** 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 SPECIFIC OUTCOMES

On successful completion of the program, the graduates will be able to,

- PSO 1: Mathematical Concepts: Equipped with the knowledge to infer the mathematical models for problem solving using data structures, design and analysis of algorithms.
- PSO2: Software Development: Exhibit proficiency to analyze, design and develop applications in various domains to provide solutions using innovative ideas.
- PSO3: Transferring Skills: Demonstrate the ability to provide solutions for real world problems through acquaintance and hands-on training.

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