NEWSLETTER

NETCOMM BULLETIN

Issue 16 | April - June 2025

Department of Networking and Communications

School of Computing

SRM Institute of Science and Technology, Kattankulathur, Chengalpattu District - 603203

NAAC	MHRD Govt. of India / UGC University Grants Commission	NIRF National Institutional Ranking Framework	QS	THE Times Higher Education World University Rankings	QS 4 Star Rating	SHANGHAI RANKING
A++	Category I with 12B Status	(2024) 12th Ranked University	(2025) World Ranking one among 46 Indian Universities	(2024) World Ranking one among 91 Indian Universities	VERY GOOD QS 4 Star Rated Globally	(2024) World Ranking Ranked 5-7 in Indian Universities

MESSAGE FROM HOD

வினை விடுவான் கைப்பழக்கம் நோக்கின்
துணைவினைத் தூக்கிக் கொளல்.

"Before undertaking a task, assess your ability;
then proceed with the determination to complete it."

Dear Students and Esteemed Colleagues,

My Hearty Wishes to you all !!

It gives me great pleasure to share this edition of our department newsletter. Over the past months, our department has witnessed remarkable achievements - from academic excellence and innovative research to cultural and community initiatives. These milestones are a testament to the dedication, hard work, and collaborative spirit of our students, faculty, and staff.

Our department is consistently offering good placements with our students getting recruited by SAP Labs, Morgan Stanley, Citi bank. It is awesome to note that our students have spent their vacation by involving themselves in internships offered by reputed companies, Including National Institute of Ocean Technology, AMD Pvt. Ltd India, Minitair Corp. India, Eaton, NovelVox, KloudPortal Technology Solutions.

As we begin our new academic year, let us continue to embrace curiosity, facilitate innovation, and uphold the values that make our department a place of inspiration and growth. I encourage each one of you to actively participate in upcoming events, contribute ideas, and strive for excellence in every endeavor.

Let this newsletter not just be a record of our accomplishments, but also a source of motivation for the journeys ahead. May this newsletter serve as a reminder of what we have accomplished and as a beacon for what lies ahead. Together, we can shape knowledge, inspire minds, and create lasting change.

Wishing you success and fulfillment in all your pursuits!!
Let us keep up the spirit of unity and pride on profession in this new academic year!!

Dr. M.Lakshmi
Professor & Head,
Department of Networking and Communications,
SRM Institute of Science and Technology.

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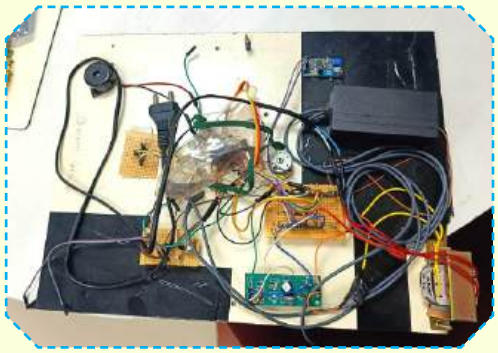

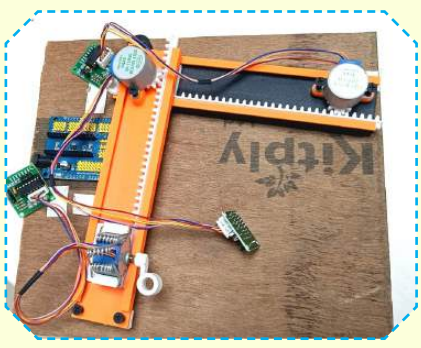

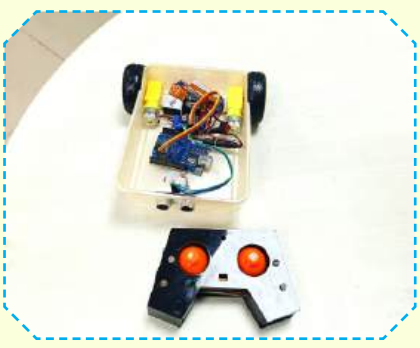

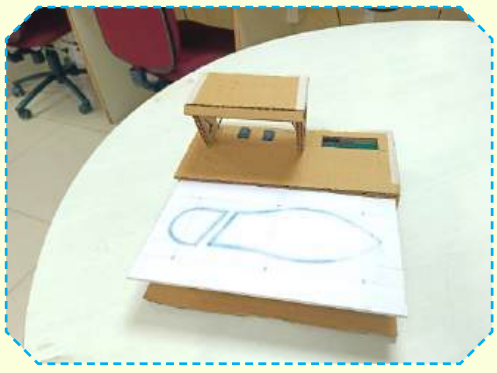

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About the Department

Department of Networking and Communications under School of Computing intend to meet the expectations of the aspiring students and to add more value to the degrees offered. The Department ensures to provide quality and value-laden education for students in the traditional and contemporary areas of Cloud Computing, Computer Networks, Cyber Security, Information Technology, Internet of Things and DevSecOps.

The programs are introduced in partnership with reputed IT companies like Amazon Web services, K7 Security, Virtusa etc. The department consists of a medley of faculty members with industrial and academic experience. The Department's keen focus is towards "networks"domain specific and specialization-based placement drives for its students. The department inculcates entrepreneurial skills in budding aspirants to pitch their innovative ideas through SRM Innovation and Incubation Center. Our International and alumni connect intrigue in bridging the gap between the trio: Academics-Industry -Research.

Vision

To Nurture as globally recognisable department in imparting the students high quality education and providing high confidence, unique knowledge and research experience in the field of networking, cyber security, forensics, information technology, cognitive computing and internet of things.

Mission

- To provide world-class IT professionals with appropriate industry and research-based curriculum.
- To train the students, that leads to entrepreneurship and develop societal need-based industries.
- To nourish the students as socially responsible professionals by providing them training in personality development, ethics, and leadership program.

Under Graduate Programs

B.Tech. Computer Science and Engineering with Specialization in Cloud Computing

B.Tech. Computer Science and Engineering with Specialization in Computer Networking

B.Tech. Computer Science and Engineering with Specialization in Cyber Security

B.Tech. Computer Science and Engineering with Specialization in DevSecOps

B.Tech. Computer Science and Engineering with Specialization in Information Technology

B.Tech. Computer Science and Engineering with Specialization in Internet of Things

Minor Degree Programme

Minor in Cyber Security
Minor in Imaging Sciences and Machine Vision
Minor in Internet of Things

Post Graduate Programs

M.Tech. Cloud Computing

M.Tech. Information Security and Cyber Forensics

M.Tech. Internet of Things

M.Tech. (Integrated) - Computer Science And Engineering with Specialization in Cyber Security and Digital Forensics

Collaboration with Great Learning

M.Tech. Cloud Computing and Block Chain

M.Tech. Cyber Security

Research

PhD in Computer Science and Engineering

SPECIALIZATIONS

CLOUD COMPUTING

The Cloud Computing specialization at SRM Institute of Science and Technology (SRMIST) is a professionally tailored program designed to bridge academic knowledge with industrial requirements. The curriculum emphasizes cloud platforms, DevOps practices, data analytics, and AI applications. Students gain both theoretical depth and practical skills through extensive workshops, research projects, and industry collaborations, equipping them to thrive in today's fast-paced technological environment

CLOUD COMPUTING SPOTLIGHT

"Innovation is the bridge between imagination and impact."

Best Research Work

In the area of research, **Dr. M. Saravanan** achieved a significant milestone by completing the **ANRF (SERB) - TARE Fellowship for the year 2025-2026 (Phase-1)**. The fellowship was completed under the mentorship of **Dr. R. Balasubramanian**, Professor at **IIT Roorkee**, and reflects the department's dedication to fostering advanced academic research in cloud computing and related domains

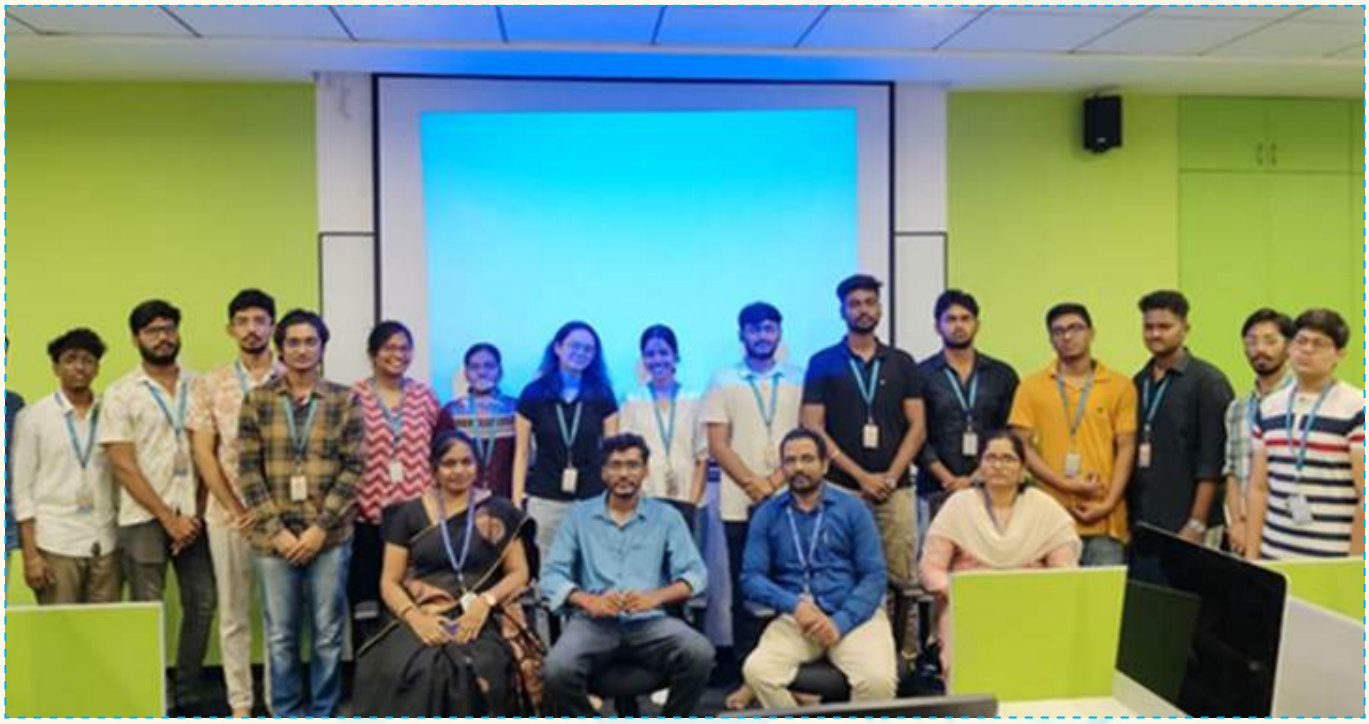
Industry Collaboration & Training

The department collaborated with **Virtusa** to organize an **Industrial Training Program on the Cloud AWS platform on 03 April 2025**. This session was aimed at **M.Tech Cloud Computing students** to enhance their practical knowledge and obtain industry-recognized certifications. The training was delivered by **Mr. Sulaxman Kaja**, Tech Learning Partner - Cloud & Gen AI at Virtusa, and engaged **30 students** in hands-on AWS-based cloud architecture and services.

Key Workshops & Hands-on Sessions

A series of impactful workshops enriched the students' practical exposure. The **"Data Orchestration and Management in Cloud Ecosystems"** workshop, held on **25–26 July, 29–30 August, and 30 September–1 October 2024**, was conducted by **Mr. S.B. Gowtham**, Data Engineer at PayPal. It focused on big data tools such as Hadoop, Spark, Hive, Sqoop, and Cassandra, enabling 64 students to gain real-time experience in data cluster management and streaming analytics.

Another major initiative was the **"Mastering Cloud Data Services and Analytics with AWS, Azure, and GCP"** workshop, organized across **30–31 January, 27–28 February, and 6–7 March 2025**. With resource persons **Mr. S.B. Gowtham**, Mr. Rohit Mahbubani from PayPal, and Mr. Harun from Hitachi, this workshop trained **123 internal participants** in cloud data warehousing, ETL pipelines, and AI/ML integration across multiple cloud platforms. The event concluded with a Project Expo on 21 April 2025, where 55+ student projects were presented and evaluated by industry experts.



The **"Advanced Data Processing Techniques"** workshop (Course Code: 21CSC533J) was held in **blended mode from 3rd to 8th March 2025,** facilitated by Mr. S.B. Gowtham. It focused on building real-time data pipelines using tools such as Kafka, Spark, Cassandra, and Apache Zeppelin, helping **47 students** gain complete end-to-end insight into big data workflows.

In addition, a two-day workshop on "Cloud DevOps" took place on 2nd and 3rd April 2025, led by Dr. Praveena Akki along with Mr. SaiKrishna Siddharth, DevOps and MLOps Engineer from Capgemini, Chennai. The session trained students on Docker containerization, Jenkins CI/CD pipeline creation, and Kubernetes deployment, including ingress setup using NGINX.

Faculty Achievements

Dr. S. Prabakeran has played a pivotal role in enhancing the academic landscape of the Cloud Computing specialization. He initiated the **Green and AI Skills Program** in collaboration with **Edunet Foundation and Shell**, aimed at final-year students for the **2025-26 academic year**, offering industry-aligned internships. He also launched the Salesforce AI Agentforce Champion Program, open to students of the **2026 and 2027 batches**, which introduces them to Salesforce's Agentforce platform, AI, Data Cloud, and prompt engineering. On completion, students earn verifiable credentials via Salesforce Trailhead.

Additionally, Dr. Prabakeran facilitated **Salesforce curriculum integration** into SRMIST's syllabus and contributed to the **Cloud-Native Application Design and DevOps Integration curriculum** for the 2026 batch under the **Wipro Centre of Excellence (CoE)**. He also initiated multiple value-added learning platforms for students, including **Google Cloud Skills Boost, AWS Academy Certifications, Microsoft E-learning, NVIDIA DLI, and Salesforce Trailhead**, boosting technical proficiency and employability.

Student Achievement

A noteworthy student achievement is that of **Vignesh Ramalingam, an M.Tech Cloud Computing student,** who successfully completed his internship in Virtusa and was converted into a **Full-Time Employee (FTE).** This reflects the practical strength and industry alignment of the program in enabling direct career transitions.

Internship Initiative

The department also launched a **summer internship under the SERB-TARE sponsored Vision Machine Intelligence Lab**, where **32 students** participated. This initiative offered real-world exposure to cloud-integrated machine learning and AI projects, helping students build expertise in emerging technologies through hands-on experimentation.

Cloud computing is not the future – it is the foundation of the present and the driver of what's next."

– Satya Nadella, CEO of Microsoft

7th April - World Health Day

"Health is the greatest gift, contentment the greatest wealth."

- Buddha

CYBER SECURITY

The Cyber Security specialization at SRM Institute of Science and Technology (SRMIST) is dedicated to developing next-generation cybersecurity professionals who are capable of defending digital infrastructure, securing applications, and mitigating cyber risks across sectors. The vision is to build a secure digital society by training students with advanced knowledge and ethical practices. The mission focuses on delivering an interdisciplinary curriculum that merges cryptography, network security, ethical hacking, cloud security, and threat intelligence, while also enabling research, hands-on learning, and industry collaboration.

Academic Excellence and Research Output

Cyber Security students and faculty at SRMIST have shown strong research productivity. Notable among them is **Dr. S. Metilda Florence**, who completed the **NPTEL-AICTE FDP** on Privacy and Security in Online Social Media. Additionally, **Dr. V. Hemamalini completed a certified course on Cyber Security, Tools, Techniques and Countermeasures** and authored multiple book chapters on emerging topics such as **Industry 5.0, digital tools, and smart sensor systems**, published by prestigious publishers including **IGI Global, Taylor & Francis, and Elsevier**.

Faculty member **Dr. N. Prasath** has made significant contributions through **publications in international conferences and design patents**. His research on **THz photonic crystal fiber biosensors and anomaly detection in IoT using AI** has been recognized in IEEE and MDPI forums. A design patent was granted for his **IoT Edge Intelligence Car Accident Alert Unit** on 22 May 2025, and multiple national patents have been published on real-time edge AI cameras and PPE detection systems using computer vision.

Internship & Industry Exposure

A significant highlight was the **research internship led by Dr. V. Joseph Raymond** carried out the research internship program in IIIT Delhi under the mentorship of **Dr. Arun Balaji Buduru,** Associate Professor, Department of Computer Science and Engineering. Alongside students **Aashish Bhargav and Khushi Bhargava**, the team explored deep aspects of Android malware evasion techniques including **identifier renaming, string encryption, control flow obfuscation, and dynamic code loading using the DexClassLoader**. This real-world project provided insights into **malware analysis, anti-debugging, anti-emulation, and polymorphic evasion**, preparing students to handle complex cybersecurity threats.

Faculty Development & Certifications

Multiple faculty members including **Dr. M.B. Mukesh Krishnan, Dr. T. Balachander, Dr. N. Prasath, and Dr. S. Metilda Florence** have successfully completed the **"NEP 2020 Orientation & Sensitization Programme" with Grade A+** under the **Malaviya Mission Teacher Training Programme by UGC**. Furthermore, they were recognized as **Certified Master Trainers under the ISEA Cyber Defender Program, supported by C-DAC Bangalore and the Ministry of Electronics and IT, Government of India**, after completing a 2-Day Master Training Program in May 2025.

Outreach, Recognition, and Engagement

As part of outreach, **Dr.Prasath** participated in **"Empowering Young Minds",** a life skills and career fest held at a government school in Chengalpattu on 3 April 2025.

International Collaborations

On **24 June 2025, Mr. Shiva Rajagopal, Managing Director of OPEN SKY IT SERVICES LLC (USA),** visited SRMIST to mark the successful completion of a consultancy project and discuss future collaborations. The visit established a foundation for an upcoming **MoU, strengthening SRMIST's global engagement in cybersecurity consulting and research**. The interaction team included **Dr. Metilda Florence S, Dr. Fancy C, Dr. Yamini B, Dr. Murugaanandam S, Dr. Joseph Raymond V, and Dr. Anand M.**

"The best defense against cyber threats is not just technology—it's awareness, vigilance, and continuous learning."

COMPUTER NETWORKING

The Networking Specialization under the Specialized Research Group (SRG) at SRM Institute of Science and Technology (SRM IST) focuses on next-generation network architectures, cybersecurity, and intelligent networking solutions. The program covers Software-Defined Networking (SDN), Network Function Virtualization (NFV), 5G, IoT security, and AI-driven networking. It integrates theoretical foundations with hands-on training through advanced laboratory facilities.

Specialized Lab:

CISCO Center of Excellence (CoE)

CISCO CoE Networking lab setup in Department of NWC is a state of art facility for demonstrating Software Defined Access with all required hardware like CISCO Catalyst server(DNAC), Cisco Identity Services Engine server (ISE), SDWAN Edge Routers, C9500 -Core switches, C9300 - Distribution Switches, C9200 Access layer switches of traditional networking. This lab is supported with Umbrella Security cloud licenses along with Meraki solutions for IoT - enterprise applications. Any student having hands on exposure with this setup will be the most skilled networking engineer and will be the choice of the industry.

Memorandum of Understanding (MoU)

- **BOODSKAP Pvt. Ltd. (2023)**
- **Orangewood Automation Pvt. Ltd. (2024).**

The BOODSKAP MoU, spanning three years, has led to various industry-academic engagements such as an IoT farm visit (2018), recruitment and training (2019), IoT Center of Excellence judging (2020), company visits, tech talks (2022), and a device purchase initiative (2023). The Orangewood Labs MoU, signed for five years, focuses on hackathons, internships, placements, value-added courses, collaborative projects, and sponsored research.

" All one needs is a computer, a network connection, and a bright spark of initiative and creativity to join the economy "

- Don Tapscott

INFORMATION TECHNOLOGY

The SRG-IT Specialization continues to demonstrate excellence across research, academic contributions, and professional development. From successful Ph.D. defenses to high-impact publications and active faculty participation in national-level workshops and FDPs, the April-June 2025 quarter was a period of notable accomplishments.

Doctoral Committee Meeting:

Dr. M. Thenmozhi served as a Doctoral Committee Member during the research meeting held at Dr. M.G.R. Educational and Research Institute in 23rd June 2025.

Ph.D. Awardees:

We are proud to announce that Dr. Asha Abraham and Dr. J. Justina Michael have successfully completed their Ph.D. programs.

- **Dr. Asha Abraham** defended her thesis titled "Feature Selection and Subtype Classification of Epithelial Ovarian Carcinoma Using Machine Learning Methods," under the supervision of **Dr. R. Kayalvizhi**, Associate Professor, Department of Networking and Communications.

- **Dr. G. Divya** successfully completed her research on "Blockchain-Integrated Novel Double Auction Mechanisms in P2P Energy Trading for Various Microgrids" under the guidance of **Dr. P.Supraja**, Associate Professor, Department of Networking and Communications.

- **Dr. J. Justina Michael** completed her research titled "HierbaNetV1: A Novel Feature Extraction Framework for Deep Learning-Based Weed Identification," under the guidance of **Dr. M.Thenmozhi,** Professor, Department of Networking and Communications.

Research Publications:

- **Dr. M. Sivakumar, Dr. N. Krishnaraj and Dr. P. Savaridassan** co-authored two research articles entitled "Leveraging Big Data to Drive Smarter and Sustainable Transportation Policies", "Data-Driven Strategies for Energy Forecasting in Sustainable Supply Chain Management" published in the Urban Mobility and Challenges of Intelligent Transportation Systems, April 2025.
- **Dr. N. Krishnaraj and Dr. P. Savaridassan** also co-authored book chapters titled "Enhancing V2X Communication with Edge Computing for Real-Time Intelligent Transportation Systems", "Cybersecurity for Intelligent Transportation Systems: Protecting Critical Infrastructure" published in Urban Mobility and Challenges of Intelligent Transportation Systems, April 2025.
- **Dr. G. Suseela** published a research article titled "Security of Images Using DNA Encryption and Lorenz System in Cloud Storage" in Soft Computing and Signal Processing on May 17, 2025.

Workshops & Faculty Development Programs:

- **Dr. Asha Abraham and Ms. T. Padmavathy** successfully completed an 8-day workshop on "Examination Reforms" (Batch 18), conducted from June 30 to July 7, 2025.
- **Dr. Asha Abraham** also participated in a 3-day Faculty Development Program on "21CSE216P – Linux and Container Technologies," organized by SRMIST in collaboration with the Council of Technical Education and Training of Vectra Technosoft Pvt. Ltd., held from April 24 to 26, 2025.
- **Dr. J. Justina Michael** attended a One-day workshop on "Application of AI/ML Models for Specific Crop Acreage Mapping" organized by the Indian Institute of Remote Sensing on April 2, 2025 and "eContent Development Using AI" organized by the Directorate of Learning and Development, SRMIST on May 21, 2025. She also attended a one-month course on Quantum Computing, organized by CDAC Hyderabad and IIT Roorkee with support from MeitY, Government of India, from May 3 to May 25, 2025.
- **Dr. M. Sivakumar** participated in a 6-day Professional Development Program titled "Diving Deep into the Next Generation Intelligent Transportation Systems," held from July 21 to July 26, 2025.
- **Dr. G. Suseela** participated in "Security BSides Bangalore Annual Cybersecurity Conference 2025, held in collaboration with World Wide Women in Cybersecurity (W3-CS), on July 11, 2025, at Sheraton Grand Hotel, Whitefield, Bengaluru and also in the "Cyber Defender Program," conducted online by Information Security Education and Awareness (ISEA) and Ministry of Electronics and Information Technology (MeitY), Government of India on June 28, 2025.

"Research is seeing what everybody else has seen and thinking what nobody has thought."

– Albert Szent – Gyorgyi

INTERNET OF THINGS (IOT)

The Internet of Things (IoT) specialization offered by the Department of Networking and Communications (NWC), SRMIST, is a dynamic and interdisciplinary program that empowers students to explore the rapidly growing field of smart, interconnected systems. Under the guidance of highly experienced faculty members, students receive in-depth theoretical knowledge along with extensive practical exposure.

Expert Faculty & Infrastructure

The specialization is led by a distinguished team of professors and researchers including Dr. A. Suresh, Dr. Annapurani Panaiyappan K, Dr. C. Malathy, Dr. T.Y.J. Naga Malleswari, and others. The department is well-equipped with advanced labs such as the Intel Unnati IoT Lab and the Things of Future Lab, where students work on real-world applications and innovation-driven projects.

Academic and Industry Integration

To bridge the gap between academia and industry, the program hosts regular expert sessions and industry interactions. A notable session was conducted on April 17, 2025, by Mr. S. A. Saravana Pandian, CEO of Embien Technologies, who engaged with third-year B.E. (CSE – IoT) students during the elective course 21CSE368K – Network Programming for IoT. Students demonstrated their IoT prototypes and received valuable industry insights.

Research Excellence and Recognition

S. Kranthi Kumar Choudhary, Y. Harshit, and Dr. T. Preethiya received the **Best Paper Award** at the **2025 International Conference on Data Science and Business Systems** for their paper titled **"Smart Path Hold Direction and Traffic Sign Identification for Indian Roads: A Machine Learning Approach Using YOLOv11."** This reflects SRMIST's commitment to socially impactful and technically sound innovations.

Community Engagement & Professional Growth

The faculty members actively contribute to knowledge dissemination beyond the institution:

- **Dr. T.Preethiya** delivered a lecture on **"Intellectual Property Rights and IP Management for Startups"** at Gnanamoni College of Technology, Namakkal, on April 7, 2025.
- She also delivered a session on **"Deep Learning Applications in Healthcare"** as part of a short-term training program organized by Panimalar Engineering College in association with the IEEE Computer Society on June 10, 2025.

Alumni Engagement & Global Exposure

To provide international academic perspectives, a special alumni session titled "**Unlocking Global Higher Studies Insights"** was held on February 5, 2025, featuring **Mr. Muhammad Basheeruddin, an alumnus of New York University (Batch 2020–2024)**. This talk offered students a roadmap to pursue higher studies abroad.

Upcoming Events

The department will host a **National Seminar on "The Rise of Blue Finance"** from September 10–12, 2025, under the **AICTE VAANI Scheme 2025–26**, with a grant of **₹.2 lakhs**. The seminar aims to explore sustainable finance practices and promote technical education in regional languages.

Faculty Achievements

Faculty participation in prestigious initiatives includes **Dr.T.Y.J. Naga Malleswari and Dr. S. Ushasukhanya** attending the **AI Pragati Initiative by HPE** and Redington at Welcomhotel ITC, Chennai, on April 25, 2025, enhancing the department's industry connections.

Awards & Accolades

Ms. Banu Priya P earned **two National Awards from IIT Madras: the NPTEL Discipline Star and NPTEL Motivated Learner awards,** celebrating her commitment to lifelong learning and academic excellence.

"The Internet of Things is not a concept; it is a network, the true technology-enabled nervous system of the world."

— Edewede Oriwoh.

DEVSECOPS

The DevSecOps specialization at SRM Institute of Science and Technology (SRMIST) is a future-focused academic track that merges development, security, and operations into a single, seamless approach to secure software delivery. This program is designed to meet the growing demand for professionals who can build, automate, and deploy secure software in cloud-native environments using modern DevSecOps practices.

The vision of the specialization is to empower and nurture industry-ready DevSecOps professionals. It aims to achieve this by delivering a cutting-edge curriculum that blends software engineering, cybersecurity, and cloud automation, all aligned with evolving industry standards. The program encourages experiential learning through real-time exposure to CI/CD pipelines, infrastructure as code, containerization, vulnerability scanning, and cloud security controls.

Strategic Goals and Industry Mapping

The specialization outlines clear short-term goals, including structured faculty development programs, mapping of the curriculum with industry standards, fostering industry collaboration, and supporting student skill advancement. In the long term, the program aims to achieve Industry-Ready Program Status with NASSCOM, set up a DevSecOps Centre of Excellence with the help of industrial collaborators, and secure partnerships with 5-10 companies for internships and placements in DevSecOps roles. The roadmap also includes enabling faculty and student publications in secure automation, cloud security, and DevSecOps pipelines.

Faculty Upskilling & Centre of Excellence

The specialization has already begun faculty upskilling efforts in DevSecOps-aligned areas such as cloud automation, container security, CI/CD pipelines, and secure coding standards. These efforts are part of the groundwork for launching a Centre of Excellence in DevSecOps, where students and faculty will collaborate on research projects, industry-sponsored challenges, and real-time system security simulations.

"Security is not an afterthought - it's a shared responsibility embedded in every line of code and every stage of deployment."

23rd April - World Book and Copyright Day

"A room without books is like a body without a soul"

- Cicero

PATENT PUBLICATIONS & GRANT

April - June 2025

The Department of Networking and Communications proudly celebrates its innovation-driven spirit, with **24 patents** granted or published during the April - June 2025 quarter. These groundbreaking ideas reflect our commitment to solving real - world challenges through technology.

Healthcare and Assistive Technologies

AI Based Asthma Detection Device

Inventor: Dr. Godwin Ponsam J

Status: Design Grant

Issuing Agency: Certificate of Registration for a UK Design

Overview: AI-assisted asthma diagnosis device

AI Enabled Computing Device for Detection of Alzheimer's Disease

Inventor: Dr. G. Geetha

Status: Design Grant

Issuing Agency: Certificate of Registration for a UK Design

Overview: Early detection device for Alzheimer's using AI.

A Deep Learning Model Based Fermentation Process Analysis System for Ethanol Production from Corn

Inventor: Dr. Savaridassan P, Dr. Maranco M, Dr. M.Sivakumar, Dr. N.Krishnaraj

Status: Published

Issuing Agency: Indian Patent

Overview: Fermentation monitoring system using deep learning.

Smart Knowledge System and Guidance Application for Raising Children with ADHD

Inventors: Ramidi Manju Sha Reddy, Dr. N.Krishnaraj.

Status: Published

Issuing Agency: Indian Patent

Overview: Assistive app for ADHD parental guidance.

Smart Knowledge System and Guidance Application for Raising Children with ADHD

Inventors: Dr. R.Radhika

Status: Published

Issuing Agency: Indian Patent

Overview: AI-driven support system for children with ADHD.

A System and a Method for Medication Reminders and Adherence Tracking

Inventors: Dr. Vaishnavi Moorthy, Jagadeesan Moorthy, Vansh Jain, Natasha Kumari.

Status: Published

Issuing Agency: Indian Patent

Overview: Smart system for medical adherence and reminders.

IoT and Embedded Systems

Low-Latency Edge AI Camera with Real-Time Image Processing and Analysis for IoT Applications

Inventors: Dr. N. Prasath
Status: Design Grant
Issuing Agency: Indian Patent
Overview: Real-time edge AI camera for IoT applications.

IoT-Enabled Worker Safety System with Computer Vision and AI

Inventor: Dr. N. Prasath, Dr. A. Arun
Status: Design Grant
Issuing Agency: Indian Patent
Overview: AI-powered PPE compliance monitoring system.

IoT Edge Intelligence Car Accident Alert Unit

Inventors: Dr. N. Prasath
Status: Design Grant
Issuing Agency: Indian Patent
Overview: Real-time alert system for car accidents using IoT.

IoT Based Electric Vehicle Energy Consumption Predicting Device

Inventors: Dr. A.Vijay Vasanth
Status: Design Grant
Issuing Agency: Indian Patent
Overview: Energy usage prediction for EVs using IoT.

IoT Based Data Security Analytic Device

Inventors: Dr. A.Vijay Vasanth, Dr. M. Jeyaselvi
Status: Design Grant
Issuing Agency: Indian Patent
Overview: IoT-integrated system for data analytics and security.

Smart Infrastructure and Safety

A Real-Time Safety Monitoring System for Building Sites

Inventors: Dr. P. Mahalakshmi

Status: Design Grant

Issuing Agency: Indian Patent

Overview: Construction site safety using IoT-based real-time monitoring.

IoT-Integrated Machine Learning Framework for Automated Flyover Construction and Maintenance

Inventor: Dr. N. Senthamarai

Status: Published

Issuing Agency: Indian Patent

Overview: ML-based maintenance and planning for flyovers.

Vehicle Driver Drowsiness Detection Device

Inventors: Dr. G. Geetha

Status: Design Grant

Issuing Agency: Indian Patent

Overview: Driver fatigue monitoring and alert system.

AI Based Wearable Device for Women Security

Inventors: Dr. B. Yamini

Status: Design Grant

Issuing Agency: Indian Patent

Overview: Wearable safety alert device for women.

AI in Sports and Industrial Measurement

AI Based Athlete Stamina Measuring Device

Inventors: Dr. G. Geetha

Status: Design Grant

Issuing Agency: Certificate of Registration for a UK Design

Overview: Performance tracking device for athletes using AI.

AI Based Viscosity Measuring Device

Inventor: Dr. Godwin Ponsam J

Status: Design Grant

Issuing Agency: Certificate of Registration for a UK Design

Overview: AI device for measuring fluid viscosity in industries.

Agriculture and Environmental Sustainability

Automatic Detection and Quantification of Microplastics in Water Sources Using Spectroscopy System

Inventors: Dr. N. Krishnaraj, Anish Sawan, Awni Rajput

Status: Published

Issuing Agency: Indian Patent

Overview: Spectroscopy-based microplastic detection system.

Blockchain Controlled Farm Monitoring Device

Inventors: Dr. S. Prabakeran, Dr. G. Suseela

Status: Design Grant

Issuing Agency: Indian Patent

Overview: Secure IoT farm monitoring via blockchain.

Real-Time Fertilizer Testing and Crop Growth Simulation Using Digital Twin Systems with Deep Learning

Inventors: Dr. M. Sivakumar, Dr. N. Krishnaraj, Dr. Maranco M, Dr. Savaridassan P

Status: Published

Issuing Agency: Indian Patent

Overview: AI-enabled Digital Twin for crop growth and fertilizer simulation.

Cybersecurity and Data Management

Virtual Data Creation to Satisfy App Permissions

Inventors: Dr. Maranco M

Status: Design Grant

Issuing Agency: Indian Patent

Overview: Privacy-preserving data synthesis for app permissions.

Network and Computational Intelligence

System for Automated Graph Theory Analysis in Network Optimization

Inventors: Dr. Praveena Akki

Status: Published

Issuing Agency: Indian Patent

Overview: Network optimization using automated graph theory analysis.

Aco-Rl Task Scheduling And Assignment System With Q-Learning and Sarsa for Workload Optimization

Inventors: Dr. N. Krishnaraj, Sampath Kumar

Status: Published

Issuing Agency: Indian Patent

Overview: Hybrid RL model for intelligent task scheduling.

An Energy Efficient Data Transmission through Cluster Head in Flying Ad-Hoc Network Using K-Means Density Clustering Approach

Inventors: Dr. P. Balamurugan

Status: Published

Issuing Agency: Indian Patent

Overview: Efficient UAV communication using clustering techniques.

Education Technology

AI Based Learning And Teaching Device

Inventors: Dr. P.Mahalakshmi, Dr. S.Thenmalar

Status: Design Grant

Issuing Agency: Indian Patent

Overview: AI-powered education and learning enhancement tool.

These initiatives not only uphold the SRM spirit of academic excellence but also emphasize our department's drive to bridge the gap between academia and societal impact through technology.

"Technology like art is a soaring exercise of the human imagination."

– Daniel Bell

Congratulations to all faculty members, researchers, and student collaborators for their groundbreaking contributions and for upholding SRM's legacy of innovation. We celebrate your success and look forward to many more milestones ahead!

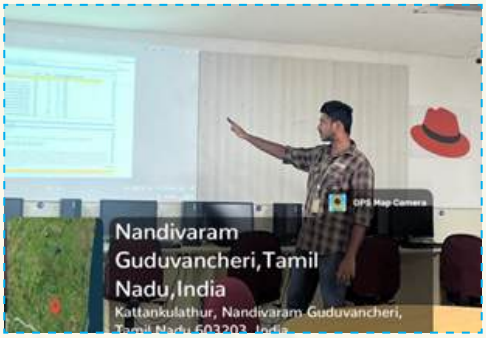
"Every great advance begins with a question, a spark - and the courage to pursue it. Congratulations, innovators!"

RESEARCH ORATION

We are proud to showcase the innovative research presented by our scholars this quarter. Their work exemplifies emerging trends, technical exploration, and academic excellence in cutting-edge domains.

Subashini N J (Reg. No: RC2313001301001)
Supervisor : Dr. Venkatesh K
Title : Hyper-parameter Tuning for Feature Selection Methods
Date : 05-04-2025
Subashine focused on enhancing model performance by fine-tuning hyper-parameters involved in feature selection, leading to better accuracy and reduced computation time in data-driven applications.

Harish Kumar J (Reg. No: RA2213003011002)
Supervisor : Dr. Godwin Ponsam J
Title : Web Application Security
Date : 12-04-2025
Harish explored current threats in web-based environments and proposed robust security mechanisms to safeguard applications from unauthorized access and cyberattacks.



Pushparaj E (Reg. No: RC2313003011013)
Supervisor : Dr. Arun A
Title : LSTM (Long-Short Term Memory)
Date : 26-04-2025
Pushparaj provided an in-depth analysis of LSTM architectures and demonstrated their effectiveness in handling long-range dependencies in sequential data, particularly for NLP tasks.

Jenny Kalaiarasi S (Reg. No: RA2313003011001)
Supervisor : Dr. Nirmala K
Title : Understanding BERT
Date : 31-05-2025
Jenny dissected the BERT language model and illustrated its impact on various NLP applications, including sentiment analysis, question answering, and contextual word understanding.

Mimnu C Tomy (Reg. No: RA2313003011000)
Supervisor : Dr. Malathy C
Title : Computer Vision and OpenCV
Date : 14-06-2025
Mimnu explored real-time computer vision techniques using OpenCV, focusing on object recognition, edge detection, and intelligent image processing solutions.

Congratulations to all our scholars for pushing the boundaries of research and contributing to the future of science and technology!

JOURNALS PUBLICATIONS

April to June 2025

The Department of Networking and Communications proudly presents a curated list of journal publications from April to June 2025, showcasing the innovative research contributions of our faculty and scholars. These peer-reviewed articles span diverse domains such as Artificial Intelligence, IoT, Cybersecurity, Smart Healthcare, Remote Sensing, and Blockchain technologies. Each publication reflects our commitment to academic excellence, interdisciplinary collaboration, and real-world impact.

Healthcare and Medical AI

An Intelligent Framework for Skin Cancer Detection and Classification Using Fusion of Squeeze-Excitation-DenseNet with Metaheuristic-Driven Ensemble Deep Learning Models

Authors: J. D. Dorathi Jayaseeli, J. Briskilal, C. Fancy, V. Vaitheeshwaran, R. S. M. Lakshmi Patibandla, Khasim Syed, Anil Kumar Swain

Journal: Scientific Reports

ISSN: 2045-2322

Description: By combining advanced CNNs like Squeeze-Excitation-DenseNet with metaheuristic ensemble strategies, this study significantly enhances skin cancer detection accuracy, aiding early diagnosis and treatment.

Medivision: Empowering Colorectal Cancer Diagnosis and Tumor Localization Through Supervised Learning Classifications and Grad-CAM Visualization of Medical Colonoscopy Images

Authors: Venkatesh K., Akella S. Narasimha Raju, Ranjith Kumar Gatla, Shaik Jakeer Hussain, Subba Rao Polamuri

Journal: Cognitive Computation

ISSN: 1866-9964

Description: This paper proposes an advanced diagnostic system for colorectal cancer using Grad-CAM and supervised learning models, improving tumor visualization and decision-making in medical imaging.

Cardiovascular Disease Prediction Using Hybridisation Multi Perception Classifier in Secure IoT Platform

Authors: Safa M., A. Pandian, K. Chakrapani, Karpaga Selvi Subramanian, M. Kempanna, D. Arun, K.M. UmaMaheswari

Journal: International Journal of System of Systems Engineering.

ISSN: 1748-068X

Description: Focused on healthcare, this research introduces a hybrid classifier model deployed over a secure IoT platform for early and efficient cardiovascular disease prediction.

Multi-Features Representation Enabled Speech Disorder Classification using MobileNet V3-EfficientNet B7, Linformer-Performer, and Interpretable XGBoost Classifier

Authors: Dr. Gouthaman P., Abdul Rahaman Wahab, Sait Suresh Sankaranarayanan

Journal: IEEE Access

ISSN: 2169-3536

Description: By integrating hybrid transformer models and lightweight CNNs, this work enhances speech disorder detection, balancing interpretability with deep learning performance.

Enhancing Remote Sensing Image Fusion with Deep Learning Attention Fusion Residual Approach

Authors: T. S. Arulananth, Dr. M. Mahalakshmi, Vincent Karovic, J. Chinna Babu, N. Satheesh Kumar, A. Hemantha Kumar

Journal: Discover Applied Sciences (SN Applied Sciences)

ISSN: 2025

Description: The proposed method fuses remote sensing images using an attention-residual-based deep learning technique to preserve texture and spectral fidelity in earth observation.

IoT, Sensor Networks, and Edge Technologies

Advances in Ubiquitous Computing: Integrating Location and Activity Sensing for Intelligent Services

Authors: Safa M., Dr. M. Naga Raju, Dr. Deepak, M. Devendrappa, A.N. Ashwini

Journal: Journal of Wireless Mobile Networks, Ubiquitous Computing, and Dependable Applications.

ISSN: 2093-5382

Description: This work explores the fusion of location and activity data to deliver adaptive and intelligent ubiquitous computing services in smart environments.

Meta Heuristic Image Optimisation in LiDAR Sensor Based on Cloud IoT Network and Deep Learning Algorithms

Authors: Gunna Manoj, Meenakshi K, Manjula Prabakaran, Padala Sravan, Gaddam Ravindra Babu.

Journal: Remote Sensing in Earth Systems Sciences.

ISSN: 2520-8209

Description: This article presents an optimized meta-heuristic approach for image processing using LiDAR data in cloud-based IoT systems, leveraging deep learning for improved earth observation.

Optimized Efficient Predefined Time Adaptive Neural Network for Stream Traffic Classification in Software Defined Network

Authors: V. Sujatha, S. Prabakeran

Journal: Expert Systems with Applications

ISSN: 2025

Description: The paper introduces an adaptive neural network architecture optimized for real-time traffic classification in SDN environments, improving routing precision and resource utilization.

Optimal Deep Learning Based Vehicle Detection and Classification Using Chaotic Equilibrium Optimization Algorithm in Remote Sensing Imagery

Authors: Youseef Alotaibi, Krishnaraj Nagappan, Tamilvizhi Thanarajan, Surendran Rajendran

Journal: Scientific Reports

ISSN: 2045-2322

Description: This research integrates deep learning and chaotic optimization to accurately detect and classify vehicles in aerial remote sensing images, aiding smart surveillance and transportation analysis.

Combined Optimization Strategy for IoT Resource Allocation with Workload Prediction

Authors: B. Sasikala, K. Kalaiselvi, V. Senthil Murugan

Journal: Sustainable Computing: Informatics and Systems

ISSN: 2210-5379

Description: A hybrid optimization approach is developed for predictive IoT workload handling, ensuring sustainable and efficient resource management across distributed smart environments

Cluster Routing for Real-Time Location Awareness QoS Specific Spatial Distribution for Improved QoS in Wireless Sensor Networks (WSNs)

Authors: K. Kalaiselvi, Chin-Shiuh Shieh, V. Senthil Murugan

Journal: International Journal of Computer Networks and Applications.

ISSN: 2395-0455

Description: This work advances spatially-aware routing strategies in WSNs to meet QoS constraints using dynamic clustering and location-aware transmission models.

Cybersecurity and Blockchain

A Secured Privacy-Preserving Multifactor Approach for Autonomous Vehicles Using Blockchain Technology

Authors: Sabavath Sarika, Dr. S. Prabakeran

Journal: Recent Advances in Electrical and Electronic Engineering.

ISSN: 2352-0973

Description: This paper introduces a blockchain-based privacy-preserving framework designed to enhance security in autonomous vehicles using multifactor authentication strategies. Blockchain-Based Multiobjective Secure Task Offloading for Mobile Edge Computing.

Blockchain-Based Multiobjective Secure Task Offloading Strategy Utilizing Optimized Conditional Self-Attention Generative Adversarial Network for Mobile Edge Computing in Internet of Vehicles

Authors: Sabavath Sarika, Dr. S. Prabakeran.

Journal: International Journal of Communication Systems.

ISSN: 1099-1131

Description: This study presents a secure offloading mechanism using blockchain and advanced GAN models to enhance computation efficiency in mobile edge networks within Internet of Vehicles (IoV) environments.

Enhanced Cyberthreat Detection and Classification with CMCOADL-TDC Using Deep Learning and Optimization Techniques

Authors: U. Sakthivelu, Vinoth Kumar C N S

Journal: Technical Gazette

ISSN: 2025

Description: This research presents CMCOADL-TDC, a composite model integrating deep learning with optimization algorithms to strengthen cyberthreat identification and response capabilities across digital environments.

A Unified Elliptic Curve Cryptographic Algorithm for Secure Communication and Homomorphic Encryption: A Multi-Parameter (Built-in CIA) Approach

Authors: Dr. Mary Subaja Christo, Josepha Menandas J

Journal: Results in Engineering

ISSN: 2590-1230

Description: The paper proposes a unified ECC model that supports secure communication and homomorphic encryption using an integrated confidentiality-integrity-availability (CIA) framework.

Smart Infrastructure and Remote Sensing

Disaster Management Based on Biodiversity Conservation Using Remote Sensing Data Analysis with Machine Learning Model

Authors: Kiran Sree Pokkuluri, Talla Mounika, N. Durga Devi, D. Ratna Kishore, B. Balakiruthiga, B. Murali Krishna

Journal: Remote Sensing in Earth Systems Sciences

ISSN: 2520-8209

Description: This article addresses disaster management through biodiversity monitoring using machine learning models on remote sensing data, providing predictive insights into ecological threats.

Geometric Optimisation of Unmanned Aerial Vehicle Trajectories in Uncertain Environments

Authors: J. Akshya, M. Sundarrajan, S. Amutha, Rajesh Kumar Dhanaraj, Adil O. Khadidos, Shitharth Selvarajan

Journal: Vehicular Communications - Elsevier.

ISSN: 2214-210X

Description: This study proposes a geometric optimization technique to enhance UAV trajectory planning in unpredictable and constrained environments, ensuring mission efficiency and safety.

A Multifaceted Comparative Analysis of Incremental Dynamic and Static Pushover Methods in Bridge Structural Assessment, Integrated with Artificial Neural Network and Genetic Algorithm Approach

Authors: Ashwini Satyanarayana, V. Sindura, L. Geetha, Rakesh Kumar, Mohd Asif Shah, Mary Subaja Christo.

Journal: Discover Materials.

ISSN: 2730-7727

Description: This work presents a hybrid AI-assisted approach for structural assessment of bridges, combining neural networks and genetic algorithms to evaluate resilience under dynamic loads.

AI in Industry and Automation

Enhancement on Secure Transmission of DICOM Images with Optimized Chaos Based Encryption and SPIHT-SVD with QIM Based Watermarking

Authors: Abirami R, Malathy Chidambaranathan

Journal: Ingenierie des Systemes d'Information

ISSN: 2116-7125

Description: This study offers a secure medical imaging pipeline, combining optimized chaos encryption and robust watermarking methods for safe DICOM image transmission.

An Intelligent Deep Learning Based Classification with Vehicle Routing Technique for Municipal Solid Waste Management

Authors: Nasreen Banu Mohamed Ishaqu, Metilda Florence S

Journal: Journal of Hazardous Materials Advances.

ISSN: 2772-4166

Description: This paper presents a smart waste management system using deep learning for classification and vehicle routing, improving operational efficiency and sustainability in municipal waste logistics.

Privacy-Enhanced Secure Framework for Educational Data Protection and Analysis

Authors: V. Balachandar, Venkatesh K

Journal: International Journal of Information Technology (Singapore).

ISSN: 2511-2112

Description: This work introduces a privacy-focused architecture that secures educational data from unauthorized access while enabling intelligent data analytics, promoting safer digital learning ecosystems.

Harnessing Artificial Intelligence in Financial Fraud Detection and Prevention Systems

Authors: B. Sowmiya, B. Ida Seraphim, Fancy C, R. Abirami, Azham Hussain

Journal: International Journal of Innovative Research and Scientific Studies.

ISSN: 2617-6548

Description: This research explores AI-powered models to detect and prevent financial fraud, leveraging anomaly detection and predictive analytics for proactive threat management.

Agriculture and Environmental Sustainability

An Intuitive Analysis on Early Detection with IAGT Model for Cotton Crop Yield Prediction

Authors: Porandla Srinivas, Dr. Suresh A

Journal: Journal of Theoretical and Applied Information Technology

ISSN: 1817-3195

Description: This study introduces the IAGT model, a novel approach for early detection and accurate yield prediction in cotton crops, enhancing agricultural intelligence using theoretical computing methods.

During the period from April to June 2025, the Department has achieved notable academic contributions with **9 book/book chapter publications** and **76 conference papers across international platforms**. The book chapters span vital emerging domains such as Explainable AI in security and healthcare, quantum neural networks, IoT-driven remote health monitoring, RFID-based wireless EV charging, and data protection for Society 5.0. These scholarly works reflect the department's commitment to transformative research and human-centric innovations. In parallel, the 76 conference publications present an impressive spectrum—from AI applications in healthcare (such as heart arrhythmia detection and patient monitoring), smart infrastructure and IoT (like automated parking and smart drainage systems), cybersecurity with blockchain, and cloud auditing, to sustainability initiatives focused on climate prediction and plastic waste management. Additionally, significant advances were made in autonomous UAV systems, recommender systems, and generative AI-powered solutions like chatbots and emoji synthesis. These collective efforts underscore the department's dynamic presence in interdisciplinary research, fostering innovation that resonates with real-world impact.

"In research, every question answered opens a doorway to deeper discovery—true innovation begins where comfort zones end."

22nd May – International Day for Biological Diversity

"In every walk with nature one receives far more than he seeks."

– John Muir

Innovation Through Industry Partnerships

Consultancy Work

The Department of Networking and Communications continues to strengthen its industry-academia collaborations through impactful consultancy projects. From April to June 2025, our faculty members have actively partnered with reputed organizations, offering expert solutions in AI-driven platforms and cybersecurity strategy. These consultancies not only demonstrate the practical relevance of academic expertise but also serve as a platform for real-world problem solving, innovation, and institutional visibility.

AI Interview Platform

Collaborating Agency:

Nyx Wolves Freelance & Business Solutions Pvt. Ltd

Consultancy Amount:

₹. 1,18,000

Team Members

Dr. Meenakshi K
Assistant Professor, NWC, SRMIST

Dr. Saranya G
Assistant Professor, NWC, SRMIST

Dr. M. Safa
Assistant Professor, NWC, SRMIST

The Department of Networking and Communications successfully collaborated with Nyx Wolves Freelance & Business Solutions Pvt. Ltd on developing an AI-powered interview platform. The project involved designing intelligent models to simulate real-time interview scenarios, enabling organizations to streamline recruitment through automated assessments and candidate evaluation. Faculty members contributed their expertise in machine learning, natural language processing, and user-centric platform design to create a solution that meets industry standards.

"Innovation thrives where expertise meets opportunity - consultancy bridges that path from ideas to impactful solutions."

Congratulations!

Faculty Achievements

Dr. B.Yamini, Associate Professor, NWC, SRMIST.

Along with students Harshith Yannakula (RA2211028010148) and Moturi Nitheesh Kumar (RA2211028010185), was recognized for their innovative project titled **"LoRaWAN Enabled Smart Landslide Early Detection,"** receiving a Certificate of Appreciation at the Project Expo NWC'25 organized by the Department of Networking and Communications, SRM Institute of Science and Technology, Kattankulathur, on 4th April 2025.

The team further earned the **Best Paper Award** for the same work at the IEEE **5th International Conference on Computing and Communication Technology (ICCCT)**, held at Sairam Engineering College, Chennai, on 16th and 17th April 2025.

Dr. M.Thenmozhi, Professor, NWC, SRMIST.

Supervised a three-month **internship** for Mr. Dusabimana Jean De Dieu (Registration No: 223028004), a Master of Science student in IoT-WISeNet at the University of Rwanda, African Centre of Excellence in Internet of Things (IoT). The internship was conducted from January to April 2025, providing him with hands-on experience and guidance in his field of study.

Served as the **Session Chair** during the forenoon session of the **5th International Conference on Internet of Things (ICIoT 2025)**, organized by the Department of CTECH, SRM Institute of Science and Technology, Kattankulathur, on April 3, 2025. Her leadership and expertise contributed significantly to the session.

Served as the **Session Chair** during the forenoon session of the **International Conference on Data Science and Business Systems**, organized by the Department of DSBS, SRM Institute of Science and Technology, Kattankulathur, on April 17, 2025. Her engaging discussions enriched the conference.

Dr. P.Balamurugan , Associate Professor, NWC, SRMIST.

Served as a **Session Chair** at the **2nd International Conference on Data Science and Business Systems**, held on 17th & 18th April 2025 at SRM Institute of Science and Technology. His contribution added significant value to the technical discussions and overall success of the conference.

Dr. N. Krishnaraj, Professor, NWC, SRMIST.

Delivered an expert talk on **"Future Trends and Innovations in AI for Precision Medicine"** on 22nd April 2024, as part of the two-day **National Seminar on "AI-Driven Decision Support Systems for Transformative Precision Medicine"** organized by Karpaga Vinayaga College of Engineering and Technology.

Dr. V.Hemamalini , Associate Professor, NWC, SRMIST.

Received a Certificate of Appreciation for serving as an **Expert Speaker** in the One-Day Seminar on **"Human Values and Ethics"**, organized by the Department of Aerospace Engineering at SRM Institute of Science and Technology on 24th April 2025. Her insightful talk greatly enriched the seminar, inspiring participants to reflect deeply on the role of ethics in professional and personal life.

Dr. G. Saranya , Assistant Professor, NWC, SRMIST.

has been honored with the prestigious **"International Academic Excellence Award 2024-25"** by Green ThinkerZ, India. This recognition celebrates her **outstanding contributions to academics and research**. The award highlights her commitment to excellence and innovation in higher education.

Congratulations!

Faculty Upskilling

Dr. Angayarkanni S A,

Assistant Professor, NWC, SRMIST.

Secured a certificate on **'Edge Computing'** and **'Introduction to Internet of Things'** from NPTEL during April 2025.

Dr. P.Mahalakshmi,

Assistant Professor, NWC, SRMIST.

Recognized as the **NPTEL DISCIPLINE STAR** in April 2025

Dr. S.Thenmalar,

Assistant Professor, NWC, SRMIST.

Recognized as the **NPTEL DISCIPLINE STAR** in April 2025

Dr. A.Vijay Vasanth,

Assistant Professor, NWC, SRMIST.

Completed a **Foundation Associate Course on Oracle Cloud Infrastructure** on May 5th, 2025. He has also been awarded the title **"International Outstanding Educator Award 2025"** by MSME, Govt. of India.

Dr. G.Abinaya,

Assistant Professor, NWC, SRMIST.

Awarded as the **IoT course Topper among 38143** total number of candidates, certified by NPTEL, Govt. of India on 16th May 2025. She has also successfully completed the faculty training on **"Data Science with Python"** organized by WIPRO Technologies from 2.6.2025 to 20.6.2025.

New On Board

Dr. K. Kanmani,
Assistant Professor

Dr. A. Rajalakshmi,
Assistant Professor

Dr. Pradeshwaran V,
Teaching Assistant

Ms. Padmavathy T,
Assistant Professor Jr.G

Dr. Tamilselvi S,
Assistant Professor

Ms. Meena L C,
Assistant Professor

Ms. Priyasri G R,
Assistant Professor Jr.G

Ms. Carlin Jebakani P,
Assistant Professor Jr.G

Ms. Akhila T S,
Assistant Professor Jr.G

Mr. N. Saravanan,
Assistant Professor Jr.G

Ph.D. Powerhouse!

Driving Scholarly Achievement

Dr. Sujatha R. (Reg. No: RC2113003011067)

a full-time research scholar under the guidance of Dr. Nimala K, successfully completed her viva voce on 17th April 2025 for her doctoral research titled **"An Explorative Analytical Framework for Textual Conversations Using Embedding Models and Techniques."**

Dr. Yedida Venkata Rama Subramanya Viswanadham (Reg. No: PC2013003013004)

a part-time external research scholar under the guidance of Dr. Annapurani Panaiyappan K, successfully completed his viva voce on 17th April 2025 for his doctoral research titled **"A Framework for Data Privacy Preservation Using Optimal Key in Supply Chain Management by Adopting Hybrid Algorithms & Ethereum Blockchain Technology."**

Dr. G. Divya (Reg. No: PA19130003012074)

a part-time internal research scholar under the supervision of Dr. Supraja P, successfully completed her viva voce on 21st April 2025 for her doctoral research titled **"Blockchain Integrated Novel Double Auction Mechanisms in P2P Energy Trading for Various Microgrid."**

Dr. K. Navin Krishnamurthy (Reg. No: RA1813003011006)

a full-time research scholar under the supervision of Dr. Mukesh Krishnan M B, successfully completed his viva voce on 23rd June 2025 for his doctoral research titled **"Adaptive and Interpretable Knowledge-Based and Case-Based Clinical Decision Support Systems Using Fuzzy Rule-Based Classifier Models."**

Dr. S. Tamil Selvi (Reg. No: RC2113003011011)

a full-time research scholar under the guidance of Dr. P. Visalakshi, successfully completed her viva voce on 26th June 2025 for her doctoral research titled **"Performance Analysis of Flood Attacks in Application Layer of Wireless Sensor Network Using Machine Learning and Deep Learning Algorithms."**

Dr. S. Arunprasath (Reg. No: RC2213003011003)

a full-time research scholar under the supervision of Dr. Suresh A, successfully completed his viva voce on 27th June 2025 for his doctoral research titled **"Multifactor Authentication with Blockchain for Secure Data Sharing in an IoMT-Enabled Ambient Assisted Living Healthcare."**

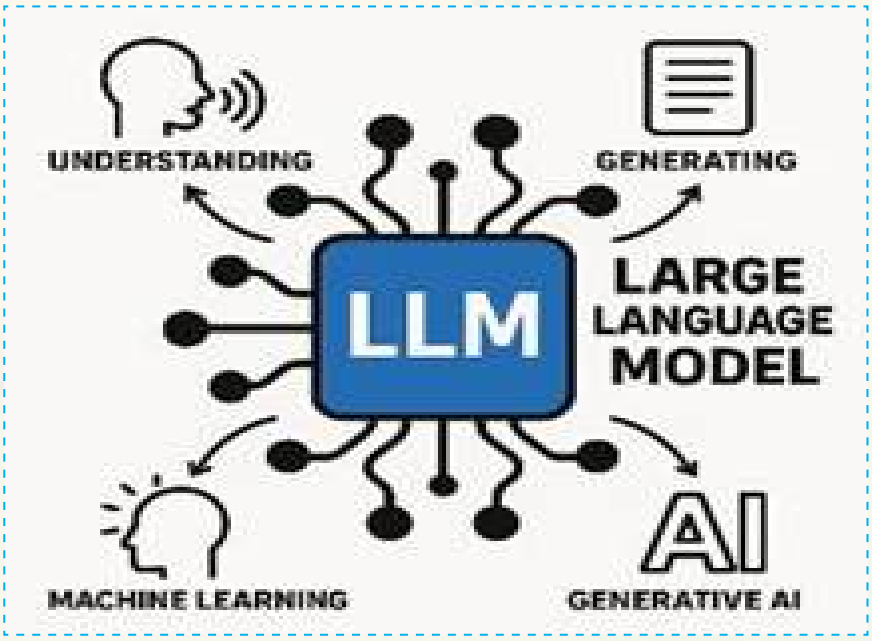
Faculty Articles

Harnessing the Synergy of Large Language Models and Retrieval-Augmented Generation for the Next Wave of Smart AI

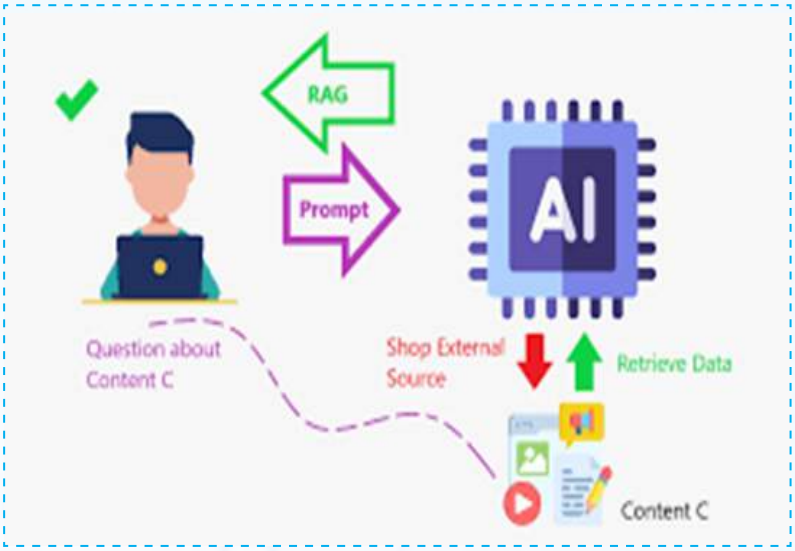
Dr. Nimala K
Associate Professor, NWC, SRMIST.

Artificial Intelligence has entered a new epoch — characterised not just by linguistic comprehension but also by precise retrieval, reasoning, and adaptation. The domain of Artificial Intelligence (AI) is undergoing swift transformation due to Large Language Models (LLMs) like GPT, LLaMA, Claude, and Mistral. Transformer-based models are trained on extensive text corpora, allowing them to produce human-like responses, summarise texts, generate code, and address difficult enquiries. Despite the formidable capabilities of LLMs, they possess a significant limitation: their static memory.

To address this, a revolutionary technique known as Retrieval-Augmented Generation (RAG) has emerged. RAG enhances the capabilities of LLMs by connecting them to external knowledge sources - such as document databases, websites, or custom vector stores. Instead of relying solely on what the model "remembers" from training, RAG enables real-time retrieval of the most relevant information to answer a query.



RAG connects LLMs with a retriever engine, which lets models use information from outside sources instead than memorising everything. It's like "ChatGPT + Google Search," but smarter



What's new?

- *Fine-tuned retrievers boost accuracy by training on domain-specific data.*
- *Semantic chunking ensures only meaningful information is retrieved (not just keyword matches).*
- *Memory-augmented RAG allows models to remember past interactions for personalized responses.*
- *Agentic RAG lets models plan and use tools dynamically — perfect for coding, shopping, or research.*

LLMs have gone beyond basic text prediction. The latest models (like GPT-4, Claude 3.5, LLaMA 3) now support:

- *In-context learning & Long-context support: LLMs learn on the fly from few-shot examples, enabling quick task adaptation.With window sizes reaching 1 million tokens, models can now process books, logs, or entire user histories.*
- *Multi-modal capabilities: From images to audio to code, LLMs are speaking more than just "text."*
- *New evaluation metrics like RAGAS and Faithfulness Scores are improving trust in AI outputs. At the same time, privacy-focused RAG is enabling secure use in healthcare and legal applications.*
- *Whether you're into machine learning, data science, healthtech, or e-commerce, the fusion of LLMs with smart retrieval is the backbone of tomorrow's AI systems.*

" The future isn't just generated — it's retrieved, reasoned, and refined "

5th June – World Environment Day

"The greatest threat to our planet is the belief that someone else will save it."

– Robert Swan

Empowering Tomorrow's Innovators: ISRO-IIRS & AICTE Internship Opportunities for SRM Students

Dr. Anand L,
Associate Professor, NWC, SRMIST.

We are pleased to announce exciting and prestigious internship opportunities and Online courses for our students through ISRO's Indian Institute of Remote Sensing (IIRS) and AICTE's national internship portal. These initiatives are part of our continued efforts to bridge academia and industry, foster applied learning, and enhance employability through real-world exposure.

ISRO-IIRS Internship & Outreach Programs

The Indian Institute of Remote Sensing (IIRS), under the Indian Space Research Organization (ISRO), offers cutting-edge training in:

- Remote sensing and GIS applications
- Satellite communication
- Earth observation systems
- Environmental monitoring and disaster management

Our students are now eligible to apply for various online certificate programs, hands-on internships, and project-based training directly under ISRO IIRS scientists - an invaluable step toward careers in geospatial science and space research.

AICTE Internship Portal

In alignment with AICTE's vision to integrate skill-based training within academic curricula, students from SRMIST can explore verified internships across leading industries, startups, and government institutions via the AICTE internship portal.

Key highlights include:

- Flexible domain-based selection
- Stipend-based and credit-based internships
- Industry-recognized certification
- This opportunity encourages our students to gain meaningful experience aligned with their academic pursuits and industry trends.

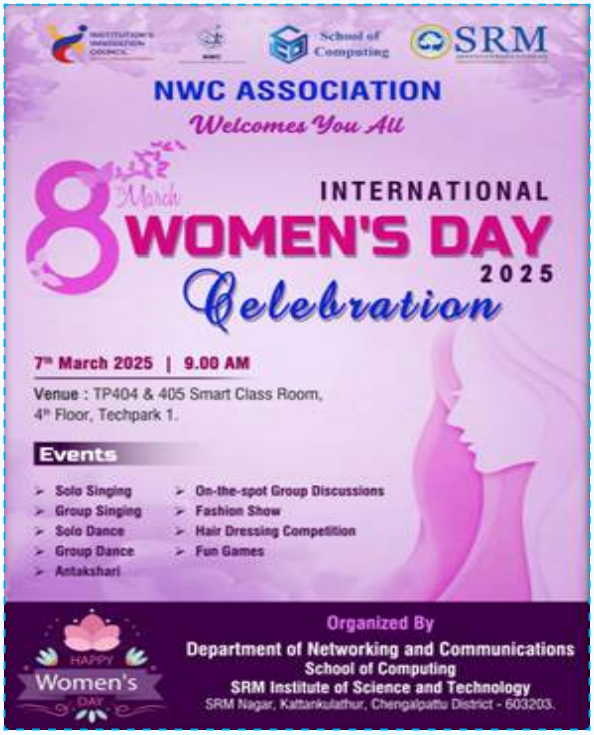
Our Commitment

- At SRM Institute of Science and Technology, we believe in holistic academic development. These internships are more than just training—they are pathways to innovation, leadership, and national development.
- We encourage all eligible students to take full advantage of these exceptional opportunities.
- For guidance and application support, students may contact the ISRO-IIRS Nodal Centre or Internship Cell or respective Department Coordinators.

Let's build the future - to-gether with ISRO, AICTE, and SRM!

Celebration

Women's day celebration 2025



Date : 07.03.2025

Conveners :

Dr. Revathi Venkataraman, Professor, Chairperson School of Computing.

Dr. Pushpalathatha, Professor, Associate Chairperson, School of Computing.

Dr. M. Lakshmi,
Professor & Head, NWC.

Co-Conveners :

Dr. Nimala K, Associate Professor, NWC.

Dr. Yamini B, Associate Professor, NWC.

Dr. Praveena Akki, Assistant Professor, NWC.

Dr. Kanmani K, Assistant Professor, NWC.

Number of Registered Participants: 45

Event Summary :

The Department of Networking and Communications successfully celebrated International Women's Day on 7th March 2025 from 8:30 AM onwards in TP405, honoring the strength, resilience, and achievements of women. The event commenced with an auspicious prayer song and the lighting of the lamp, symbolizing wisdom and empowerment. A mesmerizing classical dance performance by Dr. V. M. Gayathri set the tone for the celebration, leaving the audience captivated. Following this, the welcome address was delivered by Dr. M. Lakshmi, Head of the Department, NWC, who extended a warm greeting to all present. The event continued with a heartfelt Tamil Kavithai by Dr. Yamini B, followed by an inspiring special speech by Dr. Angayarkanni S. A, reflecting on the importance of empowering women and their invaluable contributions.The Presidential Address was delivered by Dr. Revathi Venkatraman, Chairperson of the School of Computing, who emphasized the significance of Women's Day and the role of women in shaping the future. This was followed by the Women's Day Special Address by Dr. Pushpalatha, Associate Chairperson of the School of Computing, who shared valuable insights and words of encouragement. The celebration concluded on a sweet note with a cake-cutting ceremony, marking a joyous tribute to the remarkable women who inspire change and progress.

Guest Lectures

Genesis Mini Hack Web 3.0

Date : 02.04.2025

Convener :

Dr. G. Saranya, Assistant Professor, NWC

Dr. G. Sujatha, Assistant Professor, NWC

Resource Person :

Dr. Ramesh Krishnamoorthy,
IIC Convener - Directorate of Entrepreneurship and Innovation, SRMIST.

Number of Registered Participants: 75

Event Summary :

The Genesis Mini Hack Web 3.0 was a dynamic hackathon that brought together enthusiastic innovators to develop tech-driven solutions across five futuristic tracks: Web3 & Blockchain, AI & Machine Learning, FinTech & Security, Sustainability & Social Impact, and Open Innovation. Participants collaborated in teams to ideate, build, and present impactful prototypes under expert mentorship. The event fostered innovation, hands-on learning, and real-world problem-solving. With diverse solutions and impressive teamwork, the hackathon successfully inspired a spirit of creativity, technical excellence, and social responsibility among young tech enthusiasts.

Workshop Events

Workshop on Unmasking the Digital Trail: Forensics Tools in Action

Date : 08.04.2025 - 09.04.2025

Convener :

Dr. M.B.Mukesh Krishnan, Professor, NWC.

Dr. S.Thangarevathi, Associate Professor, NWC

Dr. C.N.S.Vinoth Kumar, Associate Professor, NWC.

Dr. D.Saisanthiya, Assistant Professor, NWC.

Resource Person :

Mr. B. Krishna Murthi,

Information Security Project Manager,

Standard Chartered Bank.

Number of Registered Participants: 175

Event Summary :

The WiCyS Student Chapter at SRMIST organized a 2-Day Skill Enhancement Workshop titled "Unmasking the Digital Trail: Forensics Tools in Action" on 8th-9th April 2025 at Tech Park led by Mr. B. Krishna Murthi, Information Security Project Manager at Standard Chartered Bank, the session offered participants a hands-on experience with digital forensic tools and techniques used in real-world cybersecurity investigations. Students gained insights into evidence collection, forensic analysis, and incident reporting through live demonstrations and case studies. The workshop received excellent feedback for its practical focus and expert guidance, strengthening students' readiness for careers in cybersecurity and digital forensics.

Workshop Events

Workshop for Inventors (From Concept to Patent)

Date : 25.04.2025

Convener :
Dr. M. Jeyaselvi,
Assistant Professor, NWC, SRMIST.

Resource Person :

Dr. G. Geetha,
Deputy Director of Centre for Intellectual Property Rights,
Associate Professor,
Department of Information Science and Technology,
College of Guindy, Anna University,
Woman Scientist,
Qualified Patent Agent, Chennai.

Number of Registered Participants: 33

Event Summary :

After completion of this workshop, the participants are able to gain a clear understanding of what patents are, the types of inventions that can be patented, and the patent application process. Participants knew about a prior art search, draft a patent application, or evaluate the commercial potential of inventions. Researchers, students, and faculties identified which of their ideas are potentially patentable.

Alumni Activities

Alumni Reunion 2025

Date : 26.04.2025

Participants: 50
Alumni from the batches of 2014 to 2023

Convener :
Dr. M.Lakshmi
Professor & Head,
Networking and Communications, SRMIST.

Event Outcomes:

The event successfully provided participants with a solid foundation. It strengthens alumni relations which builds a lasting connection between the institution and its graduates and also enhances Institutional Reputation which successfully reflects positively on the quality of education. Encourages Philanthropy & leads to donations, scholarships, infrastructure funding, or academic sponsorships. Career & Internship Opportunities creates a talent pipeline for current students through alumni networks.

Outreach Activities

Visit to Adhanur Helping Hands Orphanage

Date : 01.04.2025
Time : 10:00 AM – 5:00 PM IST
Venue : Adhanur Helping Hands Orphanage
Participants : 15 students and 6 faculty members

Co-ordinators:
Dr. Geetha G , Assistant Professor, NWC.
Dr. Godwin Ponsam J, Associate Professor, NWC.
Dr. Elizabeth Jesi V , Associate Professor, NWC.
Dr. Murugaanandam S, Associate Professor, NWC.
Dr. Nimala K , Associate Professor, NWC.
Dr. Venkatesh K , Associate Professor, NWC.

Event Summary :

The visit to Adhanur Helping Hands Orphanage, home to 64 girls, was a touching and enriching experience. The team from SRMIST arrived at 11:00 AM and was warmly welcomed by the children and staff. A series of engaging activities such as games, music, and dance brought smiles all around. Donations were distributed, followed by a shared lunch and heartfelt conversations. The visit concluded with meaningful reflections and lasting memories for everyone involved.

Empowering the Next Generation: SRMIST's Life Skills & Career Guidance Fest at Panchayat Union Primary School

Date : 29.04.2025

Time : 10:00 AM

Venue : Panchayat Union Primary School in Oteri, Chengalpattu District.

Participants : 30

Convener :

Dr. S. Muruganantham, Associate Professor, NWC

Dr. L.N.B. Srinivas, Associate Professor, NWC

Dr. V. Elizabeth Jesi, Associate Professor, NWC

Dr. M. Safa, Assistant Professor, NWC

Co-Conveners :

Dr. N. Prasath, Associate Professor, NWC

Dr. K. Meenakshi, Assistant Professor, NWC

Dr. G. Saranya, Assistant Professor, NWC

Event Summary :

As part of its outreach initiative, a Life Skills & Career Guidance Fest has been organized. Sessions 1 and 2 included a Story Quiz and Hand Painting activity, designed to foster creativity and critical thinking among young students. The event saw enthusiastic participation, with students actively engaging in the quiz and expressing their artistic talents through painting. The interactive sessions not only encouraged teamwork and self-expression but also sparked curiosity and joy among the children. The event successfully laid a foundation for learning life skills in a fun, impactful way.

Our Students!!

Placement Highlights

97.95 %
Placed in
2022 Batch

93.08 %
Placed in
2023 Batch

84 %
Placed in
2024 Batch Till Jan

76.21 %
Placed in
2025 Batch Till Jan

12 Marquee Offers
(2022 Batch)
with the Highest Package of
42.5 LPA

13 Marquee Offers
(2023 Batch)
with the Highest Package of
70 LPA

13 Marquee Offers
(2024 Batch)
with the Highest Package of
52 LPA

15 Marquee Offers
(2025 Batch)
with the Highest Package of
26 LPA

UG - Placement Training

In line with our commitment to equipping students with the skills required to excel in the competitive job market, our institution conducted a series of placement training programs. Designed to enhance both technical and non-technical competencies, these sessions witnessed enthusiastic participation from students across diverse disciplines.

The Department of Networking and Communications (NWC) organized a series of impactful placement training sessions during April - June 2025 to prepare students for upcoming recruitment drives.

Our faculty members Dr. M. Maranco, Dr. Mursal Hamdani, Dr. Ramya, Mr. Indra Bhooshan, Dr. K. Rajeshkumar, Dr.R. Logeshwari and Dr.T. Preethiya coordinated placement training series. They conducted trainings on various skills such as Reasoning, General Aptitude and Technical. The training also includes hacker rank test, soft skill test and higher studies opportunities.

These initiatives were met with enthusiastic participation of UG Students and significantly enhanced students' technical, problem-solving, and interview preparation skills. The department remains committed to empowering students for successful placement outcomes.

PG - Placement Training

The Department of Networking and Communications (NWC) organized a series of placement training sessions during April – June 2025 for PG Students exclusively.

A total of 04 placement training sessions were conducted, focusing on technical aptitude and coding proficiency.

In April month 04 placement training activities were conducted by our faculty members. In May month 05 placement training activities and in June month 02 activities were conducted to ensure consistent practice and skill improvement. The training sessions focused on covering topic such as HackerRank Coding Practice, Code Debugging, Aptitude Tests, Quantitative Training, Coding Sessions, Technical Skill Development and Mock Test Activities.

Highlighted Activities

In June month major activities were executed focusing on recognized industry certifications and project-based learning.

1. Salesforce AI with Agentforce Champion Program : Students were enrolled and assigned to complete the Salesforce AI with Agentforce Champion Program, designed to provide essential AI and CRM skills.

2. Google cloud launchpad completion : Students were guided to complete pending learning paths under the Google Cloud Launchpad Program, reinforcing their foundation in cloud computing and preparing them for Google-recognized certifications.

Victorious Moments!!

Placement Details

2021 - 2025 Batch					
S.No	**Date Result Published**	**Company Name**	**Placement Type**	**Total Offers**	**Package**
1	01.04.2025	HCL Technology	Dream	4	CTC : 4.25 LPA
2	04.04.2025	Oracle Financial Software Services Ltd	Dream	1	CTC: 9.34 LPA
3	04.04.2025	Gen C Pro - SAP BASIS	Dream	1	CTC : 5.4 LPA
4	04.04.2025	Gen C - Sap Basis	Dream	1	CTC : 4.0 LPA
5	07.04.2025	KPMG	Dream	2	CTC : 7.0 LPA
6	12.04.2025	OnePaper Research Analysts Private Limited	Dream	1	CTC : 4.92 LPA
7	13.04.2025	Rinex Technologies Private Limited	Super Dream	2	Stipend : 25,000 PM CTC : 10.0 LPA
8	19.04.2025	Labsity	Super Dream	2	Stipend : 15000 - 25000 PM CTC : 10.0 LPA
9	22.04.2025	IBM	Dream	1	CTC : 4.5 LPA
10	24.04.2025	Federal Bank	Dream	1	CTC : 7.35 - 7.9 LPA

The Department's Placement Percentage (2021-2025 Batch) has increased from **74.04% to 75.87%** in the Month of April 2025.

Victorious Moments!!

Placement Details

2021 - 2025 Batch					
S.No	**Date Result Published**	**Company Name**	**Placement Type**	**Total Offers**	**Package**
1	15.05.2025	Federal Bank	Dream	2	CTC : 7.35 - 7.9 LPA
2	21.05.2025	ESDS Software Solution Ltd	Dream	1	CTC: 7.0 LPA
3	26.05.2025	InTrainz	Dream	2	CTC-4.0 to 6.0LPA

The Department's Placement Percentage (2021 - 2025 Batch) has increased from **75.87% to 76.18%** in the Month of May 2025.

M.Tech Offers (2026 Batch)

Super Dream offer through ILP

GANGISETTI BHAVANA SAI GAYATHRI (RA2412033010017)
M.Tech. in Cloud Computing
Company : SAP Labs
Stipend : ₹. 35,000 / PM

Dream offer through ILP

JUJJAVARAPU SUJAN CHOWDARY (RA2412033010001)
M.Tech. in Cloud Computing
Company : Nokia
Stipend : ₹. 35,000 / PM

Dream Role through ILP

NADIPALLI DURGA PRASAD (RA2412033010019)
M.Tech. in Cloud Computing
Company : Nokia
Stipend : ₹. 35,000 / PM

Victorious Moments!!

Marquee Offers

AYINENI CHAARVI SAI RENUKA CHOUDARY

(RA2211030010122)

B.Tech. in CSE with Cyber Security

Company : Citi Bank

Stipend : ₹. 75,000 / PM

CTC : 18 - 20 LPA

AFRAZ M

(RA2211030010132)

B.Tech. in CSE with Cyber Security

Company : Citi Bank

Stipend : ₹. 75,000 / PM

CTC : 18 - 20 LPA

THAMIZHINIYAN C S

(RA2112703010017)

M.Tech. (Integrated) in CSE with Cyber Security and Digital Forensics

Company : SAP Labs

Stipend : ₹. 35,000 / PM

CTC : 20 LPA

VINAY RAJAN S

(RA2211028010084)

B.Tech. in CSE with Cloud Computing

Company : Morgan Stanley

Stipend : ₹. 87,000 / PM

CTC : 25 LPA

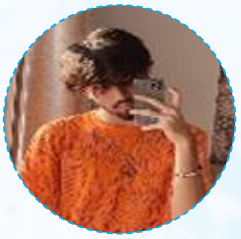
Victorious Moments!!

NWC - Notable Internship Details

K L K CHARITH
(RA2111030010106)
Company : Summer Solutions Pvt. Ltd.
Duration: 20-Jan-2025 to 20-Jul-2025
Stipend : ₹. 7,500 / PM

SHASHWAT AGARWAL
(RA2211031010083)
Company : Shamgar Software Solutions, India
Duration: 29-Apr-2025 to 28-Jul-2025
Stipend : ₹. 15,000 / PM

A. RAMNARAYAN
(RA2211030010022)
Company : Knosfer, India
Duration: 01-May-2025 to 01-Nov-2025
Stipend : ₹. 10,000 / PM



PRATYUSH GOLWALA
(RA2211031010155)
Company : Digital Doge, India
Duration: 16-Jun-2025 to 16-Sep-2025
Stipend : ₹. 10,000 / PM

TASEEN IQBAL
(RA2211030010048)
Company : Eaton India
Duration: 05-May-2025 to 11-Aug-2025
Stipend : ₹. 21,000 / PM

AYUSHMAN ANAL
(RA2211030010052)
Company : Mintair Corp., India
Duration: 17-Jun-2025 to 18-Jul-2025
Stipend : ₹. 24,950 / PM

PRANJALI SRIVASTAVA
(RA2211028010140)
Company : NovelVox, India
Duration: 10-Jun-2025 to 10-Jul-2025
Stipend : ₹. 30,000 / PM

GUNA SUNDAR
(RA2211032010088)
Company : Kloudportal Technology Solutions Pvt Ltd
Duration: 01-May-2025 to 01-Aug-2025
Stipend : ₹. 20,000 / PM

Victorious Moments!!

NWC - Notable Internship Details

VIHAAN GAUTAM
(RA2211028010141)
Company : Asiaville Interactive
Duration: 02-Feb-2025 to 01-Aug-2025
Stipend : ₹. 10,000 / PM

CHIRAG JAIN
(RA2211028010047)
Company : National Informatics Centre
Duration: 01-Jun-2025 to 31-Jul-2025
Stipend : ₹. 10,000 / PM

ARYAN AMINBHAVE
(RA2211030010094)
Company : AMD Pvt Ltd, India
Duration: 14-Jul-2025 to 15-Jul-2026
Stipend : ₹. 40,000 / PM

GOPIKA NAIR
(RA2211030010095)
Company : Cy5.io, India
Duration: 07-Jan-2025 to 07-Jul-2025
Stipend : ₹. 8,000 / PM

INDRAYUDH MUKHOPADHYAY
(RA2311031010051)
Company : IndieRise Research Labs
Duration: 04-May-2025 to 31-Jul-2025
Stipend : ₹. 5,000 / PM

KARTIK GOYAL
(RA2311030010055)
Company : Pi Craft Technology Pvt. Ltd
Duration: 24-May-2025 to 24-Jul-2025
Stipend : ₹. 5,000 / PM

RIYA CHANDRAKAR
(RA2412033010041)
Company : National Institute of Ocean Technology
Duration: 01-Jul-2025 to 30-Jun-2026.

PRINCE AYUSH
(RA2412033010008)
Company : National Institute of Ocean Technology
Duration: 01-Jul-2025 to 30-Jun-2026.

Victorious Moments!!

Student Achievement

SpazorLabs: Pioneering the Future of AI at SRM KTR

SRM Institute of Science and Technology, Kattankulathur, is proud to spotlight SpazorLabs, a promising startup founded by Chavan Sushant Sopan and Parth Nath Chauhan from the Department of Networking and Communications. Under the guidance of their faculty mentor, Dr. Hemamalini V, Associate Professor, the team is pursuing one of the most ambitious frontiers in technology. They are building a Large Language Model (LLM) from scratch, developing Agentic AI, and creating a robust AI ecosystem.

SPAZORLABS

The venture is currently pre-incubated under the Bootstrappers Research Council (BRC), which provides the perfect launchpad for innovation and experimentation. Through this initiative, SpazorLabs is advancing cutting-edge AI models while also laying the foundation for a sustainable and collaborative AI infrastructure designed for diverse applications in research, industry, and education.

The founders extend their heartfelt gratitude to Hari S. from BRC and Ramesh and Ananth from the Directorate of Entrepreneurship and Innovation (DEI) for their invaluable support and mentorship throughout this journey.

With a vision to position SRM KTR at the forefront of AI research and development, SpazorLabs represents the spirit of innovation, resilience, and academic excellence. As they continue to push the boundaries of what is possible in AI, the SRM community eagerly looks forward to the breakthroughs that lie ahead.

Students'
Co-Curricular Activities

Astha More

(RA2311032010075)

participated in the **QUAD FUSION hackathon** held on 24th April 2025 at SRMIST, Kattankulathur, Chennai, and secured the **3rd Prize**.

- **Rishabh Dev Pandey** participated in the **TechKnow 2025 Project Expo** held at SRMIST, Kattankulathur, on 22nd April 2025, and was awarded **'Best Project'** for his outstanding work.
- **DhruvVisheshGupta**(RA2211030010201) actively participated in **"Binary Clash 360"**, a Bootcamp/Hackathon/CTF event held at IITDM Kancheepuram from February 13, 2025 to May 8, 2025. The event spanned a duration of 3 months, and he **secured the 4th Rank for his outstanding performance.**

Utkarsh Singh

(RA2211030010186)

Has participated in **"HACKHAZARDS'25"**, a Hackathon organized by the Namespace Community, held from April 11, 2025 to April 30, 2025, spanning 20 days. He achieved distinction by **securing a place in the Top 100 among 2900+ teams**, demonstrating exceptional technical and problem-solving skills.

Students'
Co-Curricular Activities

Tarun Akash

(RA2211028010028)
served as a resource person and delivered a talk titled **'First Steps into Cloud Computing'** on April 6, 2025.

- **Asmit Walia (RA2211028010002)** served as a resource person and delivered a talk at EMPYREAN 2025 – TEDxSRMIST on April 9, 2025.
- **Rohan Kuppili (RA2211028010206)** presented a paper at the 4th International Conference on Ubiquitous Computing and Intelligent Information Systems (ICUIS 2024), held on 12th-13th December 2024 at Shree Venkateswara HiTech Engineering College, Erode.

- **Abinaya Shree C (RA2411031010007)** participated in Hackgrid 1.0 – Web Wave, conducted as part of INNOVATEX'25 at SRMIST, Kattankulathur, on 17th April 2025, and received a participation certificate for the one-day event."
- **Ananya, (RA2111032010011)** of 8th Semester, B.Tech CSE with specialization in IoT, has presented a paper in the conference "Advances in Communication Networks and Systems (CoACoNS 2025)" organized by the Department of Networking and Communications, SRM Institute of Science and Technology (SRM IST), Kattankulathur, Chennai.
- **Utakarsh Jain (RA2311030010054)** participated in "IntelliHack SRM", a Hackathon organized at SRM Institute of Science and Technology (SRMIST), Kattankulathur, held on April 23 and 24, 2025, over a span of 2 days.
- **Riya Maheshwari (RA2411031010021)** participated in "CODECRUX – OOPS ODYSSEY", a Coding Contest organized by the ACM Student Chapter, CINTEL, SRM Institute of Science and Technology (SRMIST), held from April 15 to April 18, 2025, over a period of 3 days. She successfully participated up to Round 2 of the contest and was awarded a Participation Certificate.

STUDENTS ARTICLE

Cloud-Native Paradigm: Pioneering the Next Frontier in Scalable Digital Innovation".

PRABU
RA2311028010058
II Year, U1 Section, Cloud Computing.

As digital transformation accelerates across industries, the limitations of traditional IT architectures have become increasingly evident. To remain agile, scalable, and competitive in this fast-paced era, organizations are embracing the cloud-native paradigm a transformative approach that redefines how software is conceptualized, engineered, and deployed.

Redefining Application Architecture

At its core, cloud-native computing leverages the full potential of cloud environments by employing a suite of modern engineering practices such as microservices, containerization, declarative APIs, and dynamic orchestration. These applications are inherently resilient, loosely coupled, and platform-agnostic, allowing them to adapt and scale seamlessly in response to demand. Unlike traditional lift-and-shift migrations to the cloud, cloud-native systems are purpose-built for distributed environments, enabling real-time scalability, autonomous recovery, and continuous innovation.

- **Elastic Scalability:** Applications automatically respond to workload changes, ensuring optimal performance and cost-efficiency.
- **Operational Resilience:** Fault isolation and self-healing mechanisms enhance uptime and reduce system vulnerabilities.
- **Accelerated Time-to-Market:** DevOps pipelines and CI/CD practices enable rapid iteration, testing, and deployment of features.
- **Cloud Cost Optimization:** Intelligent resource provisioning and serverless execution models help organizations minimize operational expenditure.

The Rise of Intelligent Cloud-Native Technologies

Cloud-native is not static—it evolves in synergy with AI, data engineering, and edge computing. Key innovations include:

Serverless Architectures: Frameworks like AWS Lambda and Google Cloud Functions eliminate infrastructure management, allowing developers to focus entirely on business logic.

Service Mesh Technologies: Tools like Istio and Consul automate secure, observable, and reliable inter-service communication.

GitOps & Infrastructure as Code (IaC): Platforms such as ArgoCD and Terraform ensure scalable, auditable, and version-controlled infrastructure deployment.

AI-Driven Operations (AIOps): The integration of machine learning into observability stacks enables predictive monitoring, anomaly detection, and automated remediation.

"Cloud-native is not just a methodology - it is the blueprint for building resilient, intelligent, and future - ready systems."

SURYANSH MISRA
RA2411031010011
II Year, Y2 Section, CSE - IT.

Generative AI has been all the hype in recent times. Everything, from posters for movies to full-fledged films, can now be made using Generative Artificial Intelligence. Generative Artificial Intelligence is a system that helps us produce or create something, usually through a defined set of rules or a predefined mechanism. The introduction of generative abilities to already powerful AI engines is nothing less than a significant breakthrough.

This new development allows human creativity to run wild, with endless possibilities popping up everywhere. Some consider it a boon, while others see it as a bane. The important thing to understand is that AI tools tend to make a gradual shift from being a bane to a boon. For example, a boss might start using generative AI techniques to create posters for their firm, which helps them eliminate the need for a design department entirely. In this scenario, AI is a boon for the boss. On the other hand, the recently fired design department employees are left jobless due to the rise of fast and efficient AI tools, making AI a bane for them.

However, AI cannot function entirely on its own. It is still in its early stages and requires prompts to imagine and develop something. Only a person with a knack for creativity and design knows the exact prompts needed to achieve the desired results. This, in turn, can lead to rehiring some design professionals who will now earn the same amount of money with a significantly lower workload. Thus, AI also has the potential to turn into a boon for the design employees.

With the arrival of tools like ChatGPT, DALL•E, Jasper, and others, the process of producing creative, fresh, and easily understandable content for the mass market has become easier than ever. Now, anyone with the right tools and mindset can start their own design and marketing business. A comprehensive knowledge of design systems and access to Artificial Intelligence tools are the only requirements to successfully begin a career in design and marketing.

While this has undoubtedly simplified many processes, ethical challenges remain in the field of artificial intelligence. The recent rise in plagiarism, music sampling, deep fakes, and similar issues has raised concerns about the ethical use of AI. Restrictions need to be placed, and a set of rules must be established, but these must also consider an individual's creative freedom. The moment rules become too rigid, the bridge between freedom and creativity begins to erode. In conclusion, Generative AI stands at the crossroads of innovation and ethical debate. It has undoubtedly revolutionized creative industries, making design and marketing accessible to millions, but it has also raised a host of serious concerns about job displacement, ethical misuse, and the dilution of originality. The key to leveraging this powerful technology lies in striking a balance embracing its potential to enhance human creativity while implementing thoughtful regulations to address its pitfalls.

ALUMNI CORNER

RISHIKA GUPTA
Software Engineer,
Philips.
2020 to 2024

Having joined my corporate journey in 2023 as a React and Spring Boot developer, I was full of ambition to prove myself, a lot of questions, and a very active ChatGPT tab. I spent hours learning how to structure a Spring Boot service, figuring out why the controller was not mapping, or googling "Java Spring MVC vs Spring WebFlux."

AI was like a tutor, ready with code snippets and occasionally a gentle virtual pat when test cases finally passed.
2023 was about "How do I write this function?". Focusing on syntax, structure, and logic building, I was driving, and AI was like the map giving directions.

Then came the transition to 2024 with "Is this the cleanest, most scalable way?", where quality mattered more, with performance, security, and best practices as the most important factors.
Now, it's 2025, and things have evolved faster than JavaScript frameworks. We've moved quickly from AI bots to GenAI to Agentic AI and even beyond. With Agentic tools in the picture, I ask for a solution, and the agent writes it, debugs it, and tests it right in my IDE. Now the job is to review, customize, optimize, and lead. Coding has shifted from creating from scratch to curating intelligently.

But here's the good news for upcoming developers and IT students: AI hasn't replaced developers (yet!), it has reframed them, making them more strategic. You shouldn't just know data structures or a programming language, know that for yourself, sure, but what you truly need to be is a problem solver, a systems thinker, and a reviewer of machine-generated work. "AI is not a replacement for developers; it's a collaboration between the two."

To the students reading this, I was right where you are- confused by React, terrified of DSA rounds, and somehow still spending more time on memes than GitHub.
If I could tell my 2023 self one thing, it'd be this:
The transition from college to corporate isn't about knowing everything.
It's about being ready to learn anything fast, scrappy, and with the right tools (yes, even AI).

So, stop worrying about whether AI will take your job and start working on how you can collaborate with it to make your job (and work) even better. The collaboration might be shared, but the vision and the lead are still yours.

14th June – World Blood Donor Day

"A single pint can save three lives, a single gesture can create a million smiles."

Did you know?

AlphaDog

Last year, Chinese scientists introduced AlphaDog, a robot dog designed to go beyond companionship. It can assist in a range of practical tasks such as delivering packages, bussing tables in restaurants, and guiding visually impaired individuals. AlphaDog is equipped with advanced sensors and powered by 5G technology, allowing it to operate autonomously and navigate its environment intelligently. Its mobility and agility make it suitable for both indoor and outdoor use. The robot represents a significant advancement in AI-driven robotics, showcasing how machines can seamlessly integrate into daily human activities.

Chip Design

Google announced that it has developed an AI capable of designing computer chips in under 6 hours a task that typically takes human engineers several months. This breakthrough showcases AI's incredible speed and efficiency, but it also raises concerns about automation replacing human jobs. While such advancements are impressive, they also spark debates about the role of AI in the workforce and the future of employment. Not every fact about AI is as thrilling some bring attention to ethical and economic challenges we must prepare for.

Cat Shelter

China's leading search engine company, Baidu, developed a smart cat shelter in Beijing powered by artificial intelligence. This innovative shelter uses AI to detect when a cat is nearby and automatically opens its door. Once inside, the cat is welcomed into a warm, heated space with access to food and water. This initiative not only showcases AI's potential for animal welfare but also highlights how technology can be used to address real-world problems compassionately. The shelter's AI ensures that only cats enter, keeping the space safe and comfortable for its intended furry visitors.

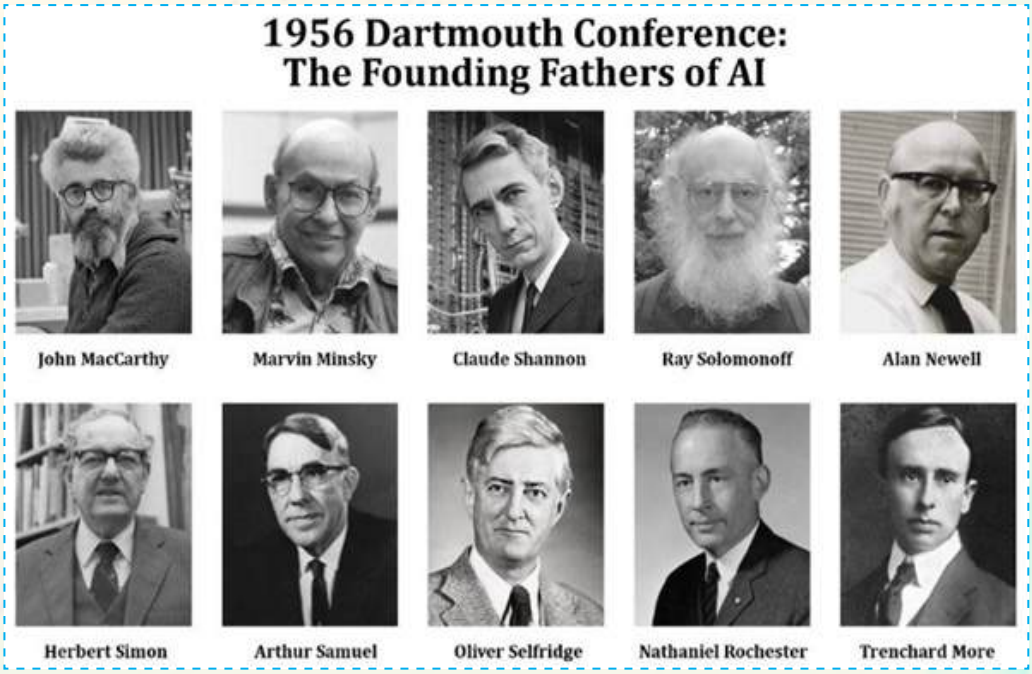
Did you know?

Deep Blue

Deep Blue was a groundbreaking AI chess-playing computer developed by IBM in 1996. It made history by becoming the first AI to defeat a reigning World Chess Champion, Garry Kasparov, in a game on February 10, 1996. This moment marked a major milestone in the development of artificial intelligence, showcasing how machines could challenge even the most skilled human minds in complex tasks. Although Kasparov won the overall match, Deep Blue's victory signaled the beginning of AI's growing role in problem-solving, strategy, and decision-making.

AI's Foundations Are Over Half a Century Old

The term "Artificial Intelligence" was first introduced at the 1956 Dartmouth University Conference, marking the birth of AI as a formal field of academic study. This historic event laid the foundation for decades of research and innovation in machine learning, robotics, and cognitive computing. What began as a science-fiction idea transformed into a dynamic and rapidly evolving discipline, influencing everything from healthcare and education to transportation and entertainment. The conference signaled a turning point, where AI moved from theoretical discussions into real-world development, shaping the modern world in profound ways.



Sudoku

	4			9				
			1	4		6		
	8		6			9		7
		3			1			6
			4			8		
5				3				
							8	
		1		7			3	2
			2			4		

Chess

Mate in 1 move with black

Logic Puzzle

Use the table to help you solve the logic problem. Each square represents a possible answer. Follow the rows and columns to find the correct combination. Draw a dot in a square for the answer where the vertical and horizontal squares meet. Draw an "x" in a square that isn't the answer.

	Game	Doll	Kite	Basketball	Blue	Green	Red	Orange
Hannah								
Jack								
Cassie								
Paul								
Blue								
Green								
Red								
Orange								

Hannah, Jack, Cassie and Paul attend a birthday party. They each bring a gift: a kite, doll, game, and basketball. After the party, each child goes home with a different color balloon: red, blue, green, and orange. Using the clues given, figure out which child brought what gift, and what color balloon they went home with.

1. **Hannah did not bring the doll as a gift but she did go home with a blue balloon.**
2. **Jack brought the basketball for a gift but did not go home with a red or green balloon.**
3. **The child who brought the kite for a gift went home with a red balloon.**
4. **Cassie brought the doll as a gift.**

Microsoft Interview Question
Can You Find The Hiding Cat?

Guess where the cat is hiding. If you miss, the cat moves 1 box, and you guess again. Strategy to the cat for sure in fewest guesses?

Brain Teaser:

- **Water Jug Puzzle**
  You have a 3-liter jug and a 5-liter jug. How can you measure exactly 4 liters of water?
- **Binary Logic**
  A device flashes a light every time the number of "1"s in its binary clock display is even. If the time is 10:45 (in 24-hour format), will the light flash?
- **Bridge Crossing**
  Four people need to cross a bridge at night with only one torch. Only two can cross at a time. Their times are 1, 2, 5, and 10 minutes. What's the minimum total time for all to cross?

Technical Questions:

Time Complexity Analysis
You have a nested loop structure:
python
Copy
Edit

```
for i in range(1, n):
    for j in range(1, i*i):
        if j % i == 0:
            for k in range(j):
                print(k)
```

What is the time complexity of the above code?

String Manipulation:

Write a function to check if a string is a rotation of another string.
Example: "abcd" and "cdab" True

Array Rotation:
Rotate an array arr[] of size n to the left by d elements without using extra space.

திருக்குறள் - THIRUKKURAL

குறள் 132

பரிந்தோம்பிக் காக்க ஒழுக்கம் தெரிந்தோம்பித்
தேரினும் அஃதே துணை.

Strive and preserve good conduct; By any reckoning,
you will find it your sole companion.

பொருள்:

வருந்தியேனும் ஒழுக்கத்தைப் போற்றிக் காக்க வேண்டும்; பலவும் ஆராய்ந்து கைக்கொண்டு தெளிந்தாலும், ஒழுக்கமே உயிருக்குத் துணையாகும்.

Explanation:

Let propriety of conduct be laboriously preserved and guarded; though one know and practise and excel in many virtues, that will be an eminent aid.

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