

Faculty Profile



Durvasula Ramya is an Assistant Professor in the Department of Computer Science and Engineering (Cyber Security), School of Engineering, Dayananda Sagar University, Bengaluru, India. She completed her M.Tech in Computer Science and Engineering with specialization in Information Security and Privacy from Sardar Vallabhbhai National Institute of Technology (SVNIT), Surat. She obtained her B.Tech in Computer Science and Engineering from Acharya Nagarjuna University.

Her research interests primarily focus on Information Security and Privacy, Cyber Security, Artificial Intelligence, Machine Learning, Federated Learning, Blockchain Technology, Privacy-Preserving Artificial Intelligence, Financial Fraud Detection, Explainable Artificial Intelligence, and Data Science. Her M.Tech thesis focuses on Blockchain-Based Federated Learning for Financial Fraud Detection, with emphasis on privacy-preserving collaborative learning, contribution-weighted aggregation, client personalization, blockchain-based audit logging, and explainable fraud detection.

She is also interested in applying secure and intelligent computing techniques to real-world problems and mentoring students in emerging technologies. Her academic and technical activities reflect a strong interest in developing privacy-aware and secure AI solutions.

Research Interests

- Information Security and Privacy
- Cyber Security
- Machine Learning and Deep Learning
- Federated Learning
- Blockchain Technology
- Privacy-Preserving Artificial Intelligence
- Financial Fraud Detection
- Explainable Artificial Intelligence (XAI)
- Data Science

Professional Highlights

- M.Tech thesis on Blockchain-Based Federated Learning for Financial Fraud Detection.
- Developed a privacy-preserving federated learning framework for banks using contribution-weighted aggregation, differential privacy, and Byzantine fault tolerance.

- Integrated client-level personalization and blockchain-based SHA-256 audit logging with SHAP explainability.

Areas of Expertise

- Python, C, C++, Java
- Machine Learning and Data Science
- Federated Learning and Privacy-Preserving ML
- Blockchain and SHA-256
- Information Security and Cyber Security
- SQL and Database Management
- HTML, CSS, React, Core Java
- SHAP and Explainable AI

Vision and Goals

Durvasula Ramya aims to contribute to the development of secure, privacy-aware, and intelligent computing systems. Her goal is to leverage artificial intelligence, machine learning, federated learning, and blockchain technologies to address practical cybersecurity and privacy challenges while supporting student learning and innovation in emerging technologies.

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