

# MANTHINI MEHER VARDHAN



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[GitHub](#)

## Education

Amrita Vishwa Vidyapeetham

September 2021 - Present

Bachelor Of Technology, Computer Science & Engineering | CGPA: 7.53/10

## Research Work Experience

- **Research Intern at TIFAC CORE SECURITY (05/2024-07/2024):** Conducted vulnerability analysis of the MQTT protocol, executing attacks across multiple layers. Implemented hashing and salting techniques to enhance security while avoiding MQTTS to reduce overhead. Documented findings in a detailed work for Journal titled **Secure and Efficient Communication for MQTT-based IoT Systems** and published for **Elsevier book**.
- **Anomaly Detection in College environment,** A computer Vision project Published in the **I-SMAC 2024** conference.

## Projects

**Mentor and Me-Online learning platform| HTML5, CSS3, JS and PHP |** [GitHub](#)

Team Project

→ Initiated application development by drawing inspiration from Udemy and Coursera and leading backend development.

→ Added a database infrastructure and key features like payment methods and review forms for an enhanced user experience and Extension of Mentor and Me is added with hybrid data structures.

**PCAP Network Forensic Analysis | Bash, Python3, Streamlit|** [GitHub](#)

Team Project

→ This is an ongoing project, with the idea of analyzing the malware in TCP streams, Object files in PCAP files, and pushing data to different APIs using **API integration** for analysis.

**Server Health Monitoring Systems| Apache, Ngnix, Slowloris, Hping3|** [GitHub](#)

Team Project

→ Implemented **Fault-tolerant and load-balancing solutions** by testing DoS and DDoS attacks on Apache and Nginx. Topologies are made in Cisco packet tracer and GNS.

→ Python for real-time data visualization, CPU optimization, and performance analysis.

**Intrusion Detection System | Machine Learning|** [GitHub](#)

Team Project

→ Developed an IDS leveraging machine learning to detect unauthorized access attempts with high accuracy. Conducted model evaluation and selection to improve detection rates and reduce false positives.

→ Achieved an accuracy of 98% using **XGBoost**

## Other Projects (SUSTAINABILITY, SOCIAL RESPONSIBILITY)

→ Got selected for the Live in Labs program, a Sustainability development initiative by Mata Amritanandamayi Math and the United Nations. Our Team worked on a **Customized GPS module for fishermen's communities** to find the deployed nets.

## Technical Skills

**Skills:** Web development, Computer Networking, Oops concepts, Computer security and RDBMS

**Languages and Frameworks:** HTML5, CSS3, C++, SQL, JS, Python, Express JS

**Tools and Technologies:** GNS3, packet tracer, Network Miner, Collab, VS code, Wifi and Bluetooth Sniffers, Wireshark, ESP32, Collab

## Certifications/Extra-curricular

- Achieved Team (Synk) Rank 10 in ACN\_CTF 2024
- Tech stall Lead at Anokha Fest 2024, worked on Real time forensic applications
- Cybersecurity blog writer|medium|[View Blog](#)
- Malware Analysis and Introduction to Assembly Language |Coursera |[Certificate](#)
- Master Wireshark 3|EC-Council|[View Certificate](#)
- Learn network hacking from scratch|udemy|[View Certificate](#)