

Monika Battula

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Professional Experience

Vertx AI

San Francisco, USA

Machine Learning & Full Stack Engineer(govertx.com)

Feb 2025 - Mar 2025

- Vertx labs, an AI-integrated platform that connects startups with investors through LinkedIn, Twitter, etc.
- Working on integration of email pipeline and Email automation.
- Tech Stack: React js, MongoDB, Vite js, API's, Web Scraping(Python, Selenium, BeautifulSoup), RAG

Goldman Sachs

Bengaluru, India

Software Engineering Intern, Network Security team

May 2023 - Jul 2023

- Conducted IT security assessments, reducing vulnerabilities by 60%.
- Proposed security upgrades, reducing account compromise incidents significantly.
- Tech Stack: Python, Security Analytics, Network Security, SIEM Tools.

Technical Skills

Languages: Python, Java, C++, C, Bash, SQL, Javascript , Ansible, Linux, Netmiko, Paramiko,

Tools: AWS, Git, Web Application Firewall, gRPC, OSPF, BGP, EIGRP, MPLS, VLAN, TCP/IP, HTTP, LAN

Technologies(Ethernet, STP, VTP), Active Directory, Operating System, Wireshark, Nmap, Telnet

Technologies: Cloud Computing, Object Oriented Programming, Threat Intelligence, Cybersecurity, SSL

Certifications: CCNA, JNCIA-Junos, Fortinet, Palo Alto Cybersecurity & Google Project Management

Education

University of Maryland Baltimore County, United States

Aug 2025 - May 2027

Master of Science in Computer Science(Thesis).

Relevant Coursework: Computer Security, Advanced Comp Networks, Software Reverse Engineering, ML,

Quantum Computing, Artificial Intelligence

Gayatri Vidya Parishad College of Engineering, Visakhapatnam

Sep 2022 - Mar 2025

Bachelor of Engineering, Information Technology(Honors in IT).

GPA 9.19/10.0

Relevant Coursework: Data Structures, Computer Networks, Machine Learning, Deep Learning, OS, NLP

Best Academic Student Award, Best Outing Student Award, Smart India Hackathon Winner, WeR4Help secretary ,

Technical Member at CSI

Academic Projects

OSPF Network Discovery Tool(OSPF, SNMPv3, Networkx, Matplotlib) [code](#)

Jan 2025 - Mar 2025

- Developed a Python-based tool to automatically discovery OSPF network topologies using SNMPv3 protocol and visualize the network graph using NetworkX and Matplotlib.
- Implemented secure SNMP sessions to retrieve OSPF neighbor information and dynamically mapped connections between routers for enhanced network diagnostics.

DNS Packet Capture and Fields Parsing (Byte Level Malicious Detection) [code](#)

Oct 2024- Dec 2024

- Engineered a sophisticated packet sniffer using raw sockets and pcap API to intercept Ethernet frames and analyze IP packets impacting 200+ network devices.
- Tech Stack: TensorFlow, NumPy ,C, raw socket programming, Berkeley Packet Filter (BPF).

Extracting Network Parameters & Building Graphs [code](#)

Jan 2023 - May 2024

- Python application to extract CPU utilization metrics from Arista switches via SSH, using regex-based parsing and real-time data logging to text files.
- Dynamically visualized performance graphs with Matplotlib, enabling efficient multi-device monitoring through multithreaded execution.

Awards and Achievements

- **SIH Hackathon Winner** – Competed in 6+ Hackathons. [Certificate](#)

Dec 2023

- **Table Tennis District** – Level 2nd Place. Selected for Cisco Poland FY'25

Jan 2024

Publications

- Published **research paper on DDoS security Mechanism** in IEEE

Mar 2025

- Published **research on network security & password protection** in IJRTI , IEEE.

Jan 2025