

## JEYTHA SAHANA VENKATESH BABU

Security Engineer

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### CORE COMPETENCIES

Machine Learning | SDLC | OS & Network Protocols | Incident Response | Threat Intelligence | Vulnerability Assessment | Risk & Compliance | Cryptography | Ethical Hacking | Endpoint Security | Cloud Security & Virtualization | Control Systems | Intrusion Detection/Prevention | Ethical Hacking | Honeypots

### EDUCATION

#### PACE UNIVERSITY (Scholarship)

New York, NY

MASTER OF SCIENCE (MS) IN CYBERSECURITY | GPA: 3.9/4.0

May 2026

#### ANNA UNIVERSITY - MADRAS INSTITUTE OF TECHNOLOGY

Chennai, India

BACHELOR OF ENGINEERING IN COMPUTER SCIENCE | GPA: 7.8/10

May 2023

### SKILLS

**Software:** C++ | RStudio | Python | PowerShell | Bash | MS Office 365

**Operating Systems:** Windows | Ubuntu | Kali | Chrome OS | Mac OS

**Cybersecurity Tools:** Firewall | SIEM (Splunk) | IDS/IPS | Honeypot (Cowrie) | Encryption | Nessus | Nmap | Metasploit | Wireshark | OWASP ZAP | Snort | Tcpdump | Apache | Docker

**Network Protocols:** TCP/IP/UDP | WLAN LAN | FTP/SMTP/ | SSH | Telnet | HTTP/HTTPS | DNS

**ICS Protocols:** Modbus | Profibus | Ethernet | HART | SCADA | DNP3

**Frameworks:** ISO27001/IEC27002/IEC62443 | NIST-800/NIST-CSF | CIS Controls | CIA | PCI | DSS | GDPR | MITRE ATT&CK | STRIDE Analysis | NERC CIP | IEC | Purdue Model

**Certifications:** CISA - Industrial Control System Cybersecurity (300) Training (1.4 CEUs) | ICS 100 - Introduction to Incident Command Systems - FEMA IS-100.c (2024) | Cybersecurity Professional Certification – Google (2024)

### PROFESSIONAL EXPERIENCE

#### Google

New York, NY

Security Consultant Intern

May 2024 – Present

#### Project 1: ICS/OT Cybersecurity Consulting & Expansion

- Architected and led content development for advanced **ICS/OT cybersecurity**, expanding global consulting services across GRC, **secure cloud integration (NERC CIP)**, and **modern SecOps (threat detection, incident response, SOC integration)**. Gained expertise in **SCADA, HMI, PLC systems, industrial protocols (Modbus, DNP3, EtherNet/IP, Profinet, OPC), and the Purdue Model**.
- Conducted hands-on **ICS/OT Healthcheck assessments, analyzing firewall rules & ACLs** to identify vulnerabilities and provide actionable recommendations for enhanced client **perimeter security and operational resilience**.
- Contributed to white papers on secure **OT cloud adoption (Google Cloud) and Zero Trust architectures** for industrial transformation.

#### Project 2: Automated Cybersecurity Assessment & Reporting Platform

- Key initiation team member for a **Python/Tkinter GUI** platform automating cybersecurity assessments via **PowerShell/Bash/Mandiant C2C and JSON processing**.
- Centralized findings and automated historical data curation**, significantly improving team efficiency and consistency in vulnerability management.

#### Amazon

Chennai, India

Machine Learning Data Associate

May 2023 – Jan 2024

- Conducted **Exploratory Data Analysis, improving operational data integrity by 90% and efficiency by 10%** through collaboration on large datasets. Ensured compliance with **SPDI, GDPR, CCPA, and DPDPA** while enhancing data accuracy using new extraction methods for classified datasets.

### ACADEMIC PROJECTS

#### OT Pentest Simulation

July 2025

- Performed an **OT penetration test simulation** on a virtual **HVAC system**, utilizing **Nmap** and **Modbus** polling tools to **exploit vulnerabilities** and manipulate **industrial processes**.

#### Network Scanner Project

Dec 2024

- Developed a **Python-based network scanner with Tkinter GUI**, detecting **100+ open ports**, identifying services, and **improving scan time by 30%** through optimization and responsive UI.

#### Cybersecurity Advisory Project

Dec 2024

- Advised cybersecurity strategies for a conceptualized global e-commerce firm on federal compliance, and international expansion. Delivered recommendations, Evaluated **NIST CSF 2.0, ISO 27001, PCI DSS**; **designed IAM lifecycle, entitlement review, MFA, SSO, adaptive auth**; implemented **Zero Trust (least privilege, continuous verification, segmentation)**; defined **RBAC** for cloud security.

#### Replication and Analysis of the Mitnick Attack: TCP Session Hijacking in a Controlled Environment

March 2025

- Executed a case study **replicating the Mitnick Attack, a TCP session hijacking technique, in a restricted lab environment**. Analyzed **SYN flooding, TCP sequence number prediction**, and spoofing-based backdoor implantation, providing security recommendations to mitigate similar network vulnerabilities.

#### Penetration Testing a Vulnerable Web Application Using OWASP Juice Shop

March 2025

- Set up and tested **OWASP Juice Shop** on **SEED UBUNTU** using **Docker**, identified **vulnerabilities**, and confirmed **open port 3000** via **Nmap** with 100% successful deployment and scan.

#### Network security and Defense for a conceptualized company

Apr 2025

- Designed and implemented a **segmented network** architecture for an e-commerce company with DMZ and internal zones; **deployed Apache server, configured firewall rules, and enabled secure VPN access**. **Integrated Snort and Splunk** for intrusion detection and centralized **SIEM**-based monitoring across the network.

### EXPERIENTIAL LEARNING

#### VoteTech: Revolutionizing Democracy – Modernizing Voting with TCS (3rd place)

December 2024

- Designed a **Secure Digital Voting System** with **data protection, UI security (screen inactivity timeout)**, and a **demilitarised zone**, presenting it to **TCS Cloud Architects & AI Directors**.