Ayushman Ray

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EDUCATION

Vellore Institute of Technology   **2022 - Present**
Bachelor of Technology in Computer Science and Engineering   CGPA - 8.36

SKILLS

Languages: Python, HTML, Java (OOP/DSA basics)
Tools: Linux, Google Colab, Flask, Webhooks, GitHub
DataBases: MySQL
Security Tools: Nmap, Scapy, Burp Suite, Wireshark, Metasploit, GoPhish, Autopsy, MobSF, JADX, Frida, OWASP ZAP

INTERNSHIP

Cyber Security & Ethical Hacking Intern – SparkIIT | (Remote)   **Dec 2025 – Jan 2026**

- **Vulnerability Assessment (VAPT):** Conducted security audits on web/network infrastructure using Burp Suite, OWASP ZAP, and Nmap; identified critical vulnerabilities including SQL Injection and XSS, providing CVSS-scored remediation plans
- **Digital Forensics:** Performed comprehensive forensic analysis on a 40GB disk image using Autopsy; successfully recovered 3,281 deleted files and reconstructed user timelines to identify criminal intent in a mock investigation
- **Phishing Simulation:** Engineered social engineering campaign (GoPhish) targeting 6 users with 66% click rate to design data-driven security awareness training
- **Mobile Security:** Performed static/dynamic analysis on Android APKs (MobSF, Frida), mapping vulnerabilities to OWASP Mobile Top 10 for compliance
- **Documentation:** Delivered 4 comprehensive security assessment reports with executive summaries, technical findings, and actionable remediation roadmaps following industry audit standards

Backend Development Intern – Staychat AI | (Remote)   **Nov 2025 – Present**

- Building WhatsApp Business API integration using FastAPI and Meta webhooks to enable real-time conversational AI for multi-property hotel management with automated booking workflows
- Implementing hybrid AI system (Dialogflow + Gemini API) to handle complex customer queries with reliable fallback responses

Software Intern – Tonbo Imaging   **Nov 2024 – Jan 2025**

- **Optimized Linux kernel boot time by 23%** (35s to 27s) and power efficiency by 15% through bottleneck analysis and parameter tuning on embedded platforms

PROJECTS

System Monitor Pro (Linux, Python, Flask)   **[Link]**

- **Full-Stack Architecture:** Engineered hybrid monitoring tool decoupling data collection (psutil) from visualization (Flask/Chart.js), ensuring zero-latency updates under load
- **Real-Time Data Pipeline:** Designed a JSON-based REST API to asynchronously fetch system metrics (CPU, RAM, Thermal) without page refreshes, optimizing frontend performance
- **Defensive Programming:** Implemented automated log rotation and error handling to prevent storage overflows, ensuring long-term stability for background Linux processes

PyCrack: Network-Enabled Hash Auditing Tool (Python, Cryptography)   **[Link]**

- Developed a CLI-based password auditor that streams 5M+ credentials from SecLists via HTTP to perform real-time Salted SHA-256 hash analysis
- Engineered a robust parsing engine to sanitize raw web response data, simulating enterprise-grade defenses against dictionary and rainbow table attacks

NetProbe: Multi-Threaded Vulnerability Scanner (Python, Sockets)   **[Link]**

- Engineered a concurrent port scanner using Python threading, and implementing socket-level banner grabbing for service fingerprinting
- Integrated automated CVE detection logic to cross-reference captured service banners against known vulnerabilities (e.g., outdated vsFTPd versions)

ACHIEVEMENTS & POSITION OF RESPONSIBILITIES

Patent: Cool Veil' smart cooling jacket (App No. 13269/2025); led 5-member team to build prototype reducing ambient temp by 18°C.

HackQuest CTF Season 10 (TCS) | December 2025

- Solved complex challenges in Cryptography, Forensics, and Reverse Engineering, securing 600 points (Official) + 300 points (Upsolve)
- Exploited a Time-Based PRNG vulnerability to decrypt data and parsed 41K+ log entries using Regex to reconstruct a hidden flag

Technical Secretary – Student Council – VIT Bhopal   **Aug 2024 – Aug 2025**

- Managed 40+ technical clubs, coordinating resource allocation, documentation, and administration liaison for university-wide activities
- **AdVITya 2025:** Directed technical operations for the college fest, supervising 40+ events and ensuring zero disruptions through systematic workflow monitoring

Technical Lead – GSoC Innovators Club – VIT Bhopal   **Jan 2025 – July 2025**

- Spearheaded 'Summer of CodeFest 25' for 100+ participants; led technical sessions on GitHub and mentored teams

CERTIFICATIONS

- **Splunk Certified User (Intro to Splunk & Using Fields)**   **Dec 2025**