

AYUSHMAN RAY

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EDUCATION

B. Tech in Computer Science and Engineering

Vellore Institution of Technology

Sept 2022 - Present

CGPA: 8.36

TECHNICAL SKILLS

Languages: Python, Java, HTML

Tools: Linux, Visual Studio Code, Google Colab, Flask, Webhooks, MySQL, GitHub

Security Tools: Nmap, Scapy, Burp Suite, Wireshark, Metasploit, GoPhish, Autopsy

EXPERIENCE

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

Backend Development Intern — Staychat AI

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 a hybrid AI system (Dialogflow + Gemini API) to handle complex customer queries with reliable fallback responses

PROJECTS

System Monitor Pro (Linux, Python, Flask)

- Full-Stack Architecture:** Engineered a hybrid monitoring tool decoupling data collection (Python/psutil) from visualization (Flask/Chart.js), ensuring zero-latency dashboard updates during high system 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)

- 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)

- Engineered a concurrent port scanner using Python threading, reducing scan times by 95% 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automated CVE detection logic to cross-reference captured service banners against known vulnerabilities (e.g., outdated vsFTPD versions)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

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

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

EXTRA-CURRICULARS

Managed technical operations for AdVITYa 2025 (College Fest), supervising 40+ events and ensuring zero disruptions through systematic workflow monitoring.

POSITION OF RESPONSIBILITY

Technical Secretary – Student Council — VIT Bhopal

Aug 2024 – Aug 2025

- Managed 40+ technical clubs and oversaw university-wide events, coordinating resource allocation, documentation, and administration liaison

Technical Lead – GSoC Innovators Club

Jan 2025 – July 2025

- Spearheaded 'Summer of CodeFest 25' for 100+ participants, leading technical sessions on GitHub and mentoring teams

CERTIFICATIONS

Splunk Certified User (Intro to Splunk & Using Fields)

Dec 2025

Cyber Security Training - SparkIIT (VAPT, Forensics, Pentesting)

Dec 2025 – Jan 2026