

Nihal Awasthi

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Education

Vellore Institute of Technology, India

Integrated M.Tech - Computer Science Engineering with Specialization in Cyber Security

Expected 2027

Cumulative GPA: 8.09

Technical Skills

Cybersecurity: Vulnerability Assessment, Penetration Testing (Burp Suite, Metasploit, Nmap), Network Security, Risk Analysis, NIST Framework

Programming & Scripting: Python, C, C++, Java, Bash, PowerShell

Application & Systems Security: Secure REST APIs, Authentication & Access Control, Linux System Hardening

Cloud & Tools: AWS EC2, Nginx, Git, GitHub Actions, Wireshark, PostgreSQL, MySQL

Experience

MyResQR.life

Aug 2024 – May 2025

Software Developer & Project Manager (Hybrid)

Bangalore, India

- Developed and deployed scalable backend services using Django on AWS EC2 (Ubuntu + Nginx), achieving 90% uptime and migrating 5,000+ legacy users to the new system.
- Led a team of 3 members, delegating tasks to streamline delivery cycles and reduce production bugs by 20%.

Outlier

Dec 2024 – Dec 2025

AI Data Annotator & Model Reviewer

(Freelance, Remote)

- Reviewed and fine-tuned 10+ AI/LLM projects across 5 domains, contributing over **60+ work hours** to model development.
- Delivered high-quality feedbacks on 200+ AI completions, supporting RLHF workflows and enhancing model alignment.

Projects

ZynqOS: Secure Web-Based Operating System | JavaScript, Systems Design, Cryptography, Security

[\[Live Platform\]](#)

- Designed and implemented a secure, **web-based operating system** with OS-like utilities and a controlled, isolated runtime, integrating native cybersecurity components for encryption, privacy protection, and vulnerability assessment within a unified platform.
- Phablet** – Custom hashing and encryption algorithm combining **AES-256, RSA** and 7 other algorithms. ([Try it here](#))
- AigesX** – Inbuilt **vulnerability scanner** designed to identify common security weaknesses and support internal security assessment. ([GitHub Repo](#))
- PhantomSurf** – Privacy-focused browser with optional **VPN and TOR routing**, demonstrating secure network communication and anonymity principles. ([GitHub Repo](#))
- Applied **low-level system security principles** from **ShadeOS** (64-bit kernel in C/Rust) to enforce process isolation and secure runtime boundaries. ([GitHub Repo](#))

Publications

Journals

- "Phablet Hashing Algorithm," *Chapter 123, ISBN: 978-3-031-87583-0*, Springer, 2026 [\[Link\]](#)
- "Data Poisoning in Large Language Models," *Chapter 168, ISBN: 978-3-031-87583-0*, Springer, 2026 [\[Link\]](#)

Conference Proceedings

- "Phablet Encryption Algorithm," *ICDCC'24 IEEE 2024* [\[Link\]](#)
- "Hybrid Threat Vectors in Language Models," *AIoT - ICIoTCT 2025*, Meteor Springer – [To be Published]

Achievements & Extracurricular Activities

- Project Manager, Operation Smile Foundation (Mar–Dec 2024): Engineered a responsive donation platform, boosting engagement 60%, donations 25%, and performance score to 98 with 40% faster load times .
- Led 3 teams of 15 members in the Cyber Warrior Club, organizing 8 workshops to enhance cybersecurity skills.
- Ranked #47 globally out of 1M+ participants in Advent of Code 2024, placing in the Top 0.005% worldwide.
- Judged two 36-hour hackathons hosted by Eureka Club and Cyber Warrior Club.