

PRATEEK PUROHIT

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EDUCATION

Vellore Institute of Technology, Vellore

Bachelor of Technology (B.Tech) in Computer Science

August 2023 – June 2027

CGPA 9.04

SKILLS

Programming Languages: Golang, Python, TypeScript, JavaScript, Java, C, C++

Frameworks & Libraries: NextJS, Prisma, React, NodeJS

Databases: PostgreSQL, MongoDB, Redis, MySQL

Tools & Technologies: Git, Linux, SQL, Docker, Podman, AWS, JWT, NGINX, Nuclei, Kafka, Kubernetes, eBPF, CI/CD

EXPERIENCE

Mahanadi Coalfields Ltd (MCL)

May 2025 – June 2025

Summer Intern

Brajrajnagar, Jharsuguda, Odisha

- Engaged in database administration tasks involving employee compensation, including salary adjustments, benefits tracking, and perk allocation.
- Pioneered new security measures that protected critical **PII** for over 10,000 employees, achieving 100% compliance with internal data privacy standards.

ACM VIT Chapter

April 2024 – Present

Core Committee Member

Vellore, Tamil Nadu

- Orchestrated a **CLI-RPG** game entirely in **Rust**, creating visually appealing terminal interfaces with **RataTUI** and **Cursive**, improving user engagement by 40%.
- Mentored 50+ participants on effective **Capture The Flag** (CTF) strategies at the Codex-Cryptum event, covering techniques such as identifying suspicious data, web exploitation via browser inspection, and thorough directory exploration.

PROJECTS

RAVEN | Real-time API Scanner, Vulnerability Detector and Dashboard

- Architected and developed a **real-time** API Vulnerability Scanner to detect and flag sensitive data exposure, including **PII** and detect **OWASP** top 10 vulnerabilities, achieving 95% accuracy in threat detection across 1000+ API endpoints.
- Designed a scalable backend infrastructure using **Golang**, **NGINX** as a reverse proxy and **Kafka** for high-throughput event streaming, implemented **eBPF**-based kernel probes for low-overhead API traffic capture and security observability, supporting 10,000+ concurrent requests with 99.9% uptime.
- Implemented a dual-database solution, utilizing **MongoDB** for flexible API data storage and **PostgreSQL** for secure user data management, reducing data retrieval time by 60%.
- Modeled a responsive UI and dashboard with **NextJS**, providing users with comprehensive scanning features across 5+ vulnerability categories, serving 200+ daily active users.
- Tech Stack:** NextJS, Tailwind, Golang, Prisma, PostgreSQL, MongoDB, Nginx, Kafka, Docker, ebp

NOCTRIX AI | Automated Document Cleansing & Security Analysis Platform

- Developed an AI-powered platform to automate the cleansing and security analysis of sensitive documents, reducing manual review time by an estimated 95%.
- Orchestrated 6 autonomous agents (e.g., Analysis, Security Assessment, Reporting) coordinated by a central **FastAPI** service to process and anonymize data, handling large files (25,000+ characters) using an intelligent chunking mechanism.
- Established a robust security layer with **PostgreSQL**, **JWT** (Access/Refresh Tokens), and **RBAC**, ensuring end-to-end data encryption for all processed assets.
- Tech Stack:** Python, FastAPI, NextJS, PostgreSQL, MongoDB, Docker, Ollama (LLMs), PaddleOCR

OSSYNE | Developer-Centric Contribution Platform

- Built a full-stack open-source marketplace using **Go** and **MySQL**, connecting maintainers with contributors via a native CLI and interactive TUI, processing 100% of workflows from terminal.
- Integrated a secure **GitHub OAuth2** authentication system with token-based API authorization, safeguarding over 15 critical operations (e.g., project creation, bounty funding, contribution acceptance) against unauthorized access.
- Constructed robust data management for over 8 interconnected entities, supporting features like reputation tracking, skills matching, and automated contribution lifecycle management.
- Tech Stack:** Go, MySQL, Docker, Echo, GORM, GitHub OAuth2, Charmbracelet/Bubble Tea, Cobra

ACHIEVEMENTS

Makethon

October 2025

- Secured Top 10 and won the Solar Energy track, developing an **IoT-enabled** and Generative-AI powered dual-axis solar tracker that doubles energy efficiency through predictive alignment and automated weather protection

Yantra Central Hack

February 2026

- Finished among Top 12 Finalists, engineering an **Ethereum-based** decentralized identity system that replaces central authorities with **smart contract wallets** and **ZK-SNARKs** for selective, gas-optimized credential verification.

CERTIFICATIONS

Full-Stack Development (MOOC) | Network Security (Google) | Penetration Testing (MOOC) | Cyber Security Analyst (IBM)