VISMAY H S

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EDUCATION

PES University — B.E. Computer Science & Engineering (AI & ML) *Bengaluru, India | Expected May 2028*

CGPA: 8.67 / 10.0 • Prof. C N R Rao Merit Scholarship (Top 25%) — Sem 1, 2 & 4 • 96.83% in Class XII

EXPERIENCE

CCITR × CID Karnataka — SDE Intern (VERTEX, Team Kavach) *September 2026 – October 2026*

- Extended VERTEX, our CIDECODE-winning OSINT platform (FastAPI REST API + Next.js/React), with logged-in Instagram/X/Facebook profile scans, suspect name/location recovery from an email or phone, and automatic linking of cases that share an account
- Built a RAG case assistant that answers only from a case's saved evidence and cites its sources, plus location detection from photos, scheduled account monitoring with alerts, and bulk suspect upload from spreadsheets
- Prepared it for police use with admin-approved logins, a tamper-evident audit log, a Chrome extension for account sign-in, one-command Docker deployment and 1,200+ automated tests

1pharmacy — AI/ML Intern *June 2026 – July 2026*

- Debugged a multi-camera face-recognition pipeline (YOLO → InsightFace → FAISS) on NVIDIA Jetson edge devices, classifying missed/duplicate visitors and tuning thresholds to recover filtered detections
- Ran multiple evaluation rounds of a CNN + VLM hand-over detector at pharmacy counters, hand-labelling hours of CCTV as ground truth, tracing misses to frozen camera streams and hidden wrists, and proposing dual-camera input
- Traced a fleet-wide Android upload failure to scoped storage not firing inotify events and shipped a supervisor-based fix
- Maintained a Tailscale/Headscale VPN mesh across live retail stores with Bash/Python automation and incident reports

TECHNICAL SKILLS

Languages: Python · C · C++ · JavaScript · SQL · Java · Bash
AI/ML: RAG · LangGraph · FAISS · YOLO · InsightFace · Vision-Language Models · scikit-learn
Web & Backend: REST APIs · FastAPI · Flask · Node.js · Express.js · React.js · Next.js · Playwright
Data & DevOps: PostgreSQL · Redis · MongoDB · SQLite · Docker · Linux · Git/GitHub · GitHub Actions (CI/CD) · AWS SES
Core Concepts: Data Structures & Algorithms · OOP · Debugging · Software Testing · Multi-Agent Systems · Cybersecurity · Edge AI

PROJECTS

FSSAI Label Compliance Agent — Multi-Agent RAG *ML System Design & AgentOps · PES University, 2026*

Tech: Python | LangGraph | FAISS | FastAPI | Redis/RQ | PostgreSQL | React | Docker

- LangGraph agents check food labels against two FSSAI regulations, cite the clause behind each finding and flag labels for review
- RAG: clause-level chunks, hybrid MiniLM + BM25 + claim-hint search (recall@5 = 1.0); a verifier rejects non-verbatim citations
- Built the backend: FastAPI REST APIs, Redis/RQ workers, PostgreSQL, an LLM gateway with retries, circuit breaker, cost tracking
- Load-tested with Locust: scaled horizontally to 3 stateless workers for ~3× throughput while meeting the p95 latency SLO

Task Manager — Full-Stack Team Project Tracker *PES University, 2026*

Tech: Next.js 15 | React 19 | Node.js | Express | MongoDB | JWT | Playwright | GitHub Actions

- Team task manager (React/Next.js front end over a Node.js/Express REST API) with projects, a Kanban board, task assignment, comments, due-date reminders and CSV export
- Role-based access (Admin / Lead / Member) checked server-side on every request; bcrypt + JWT auth, login rate limiting, a login timing-leak fix, and NoSQL-injection and CSV-formula guards
- Tested with Supertest on in-memory MongoDB, mock-API contract tests and a Playwright end-to-end journey in GitHub Actions

ACHIEVEMENTS & HACKATHONS

CIDECODE 2026 — 1st Place of 450+ Teams, Team Kavach *National-Level Hackathon · CCITR/CID Karnataka, PES University, 2026*

- Won the national-level CCITR × CID Karnataka hackathon against 450+ teams with VERTEX, an evidence-grade OSINT platform

Vichar Ideathon — 1st Place *PES University, 2026*

- Designed a privacy-first, multi-modal women's safety system combining voice, scream, gesture and behavioural-anomaly detection with real-time AWS SES alerts and geolocation tracking

CERTIFICATIONS

Cybersecurity with Distinction — PESU I/O, 2025 (Web Vulnerabilities, Cryptography, Network Defence, SOC Ops, CTF Design)