

VRAJ VED

+91 8828401227 | vraj.a.ved@gmail.com | vrajved.tech | linkedin.com/in/vrajved | github.com/VrajVed

EDUCATION

Dwarkadas J. Sangvhi College of Engineering **Mumbai, Maharashtra**
Bachelor of Technology, Computer Science and Engineering (Data Science) Sep 2024 – Sep 2028

EXPERIENCE

Associate Backend Developer **Jul 2026 – Aug 2026**
Apt. Trading *Mumbai, Maharashtra, India · Remote*

- Built an MCP + chatbot in one week for algorithmic trading strategy design via conversational AI.
- Managed Linux-based trading infrastructure on EC2 with Vim, handling real-time API integrations.

System Architect **Apr 2026 – Aug 2026**
AhumLabs *Mumbai, Maharashtra, India · Hybrid*

- Shipped a multi-tenant platform with JWT auth, RBAC, and defense-in-depth query isolation for a voice/chat assistant.
- Integrated DeepSeek and Groq LLM providers with function calling.

PROJECTS

Operations MCP - LP-Powered Business Problem Solver

- Wrapped Linear Programming algorithms (Simplex, Dual Simplex, Gomory) in a Model Context Protocol so LLMs can autonomously reason over and solve structured business optimization problems.
- Built a full-stack API platform with JWT authentication and API key management to expose the Operations MCP as a production-grade service.

Sanchay AI Harness - Agentic Automation with Human-in-the-Loop

- Built a bounded tool-calling agent loop (max 6 turns) using Groq with function calling, operating over a curated registry of 13 typed tools with strict risk classification.
- Designed a two-phase execution model: READ-risk tools execute inline for reasoning, WRITE-risk tools are staged into persisted action plans requiring explicit human approval before a transactional executor runs them with automatic rollback on failure.
- Implemented the security boundary where risk class comes from the server-side tool registry, never from the request body, preventing prompt-injection escalation attacks.

Distributed Event-Ticketing Platform

- Merged CDC pipeline, Rust load balancer (P2C + health signals), and Node.js backend into a unified distributed system in 3 days.
- Zero-polling real-time sync via Postgres WAL → Debezium → Kafka → Redis → WebSockets.

TECHNICAL SKILLS

Languages: TypeScript, JavaScript, Python, Go, Rust, C, C++
Backend & APIs: FastAPI, Flask, Node.js, Fastify, Express, REST API design, JWT auth, API key management
Infra & Tools: Linux, Docker, Kubernetes, PostgreSQL, Redis, MongoDB, Git, Vim/NVIM, Prometheus, Grafana
AI & Agents: LLM APIs, MCPs, RAG, AI agents, tool-calling workflows, WebSockets, voice/STT/TTS

EXTRACURRICULARS

Web Dev Head & Mentor, DJSCE Compute: Manage full-stack and AI projects, mentor sophomores, conduct interviews.

ACHIEVEMENTS

Top 10: Megathon 2025 (IIIT Hyderabad), Synergy at DJSCE
Finalist: Odoo x Amalthea Hackathon (IIT Gandhinagar)