Pavan Kalyan Varikuppala

Nalgonda, Telangana
pawankalyanvarikuppala2276@gmail.com | +91 9704544921
linkedin.com/in/varikuppalapawankalyan | github.com/pavan5116 | pavan5116.github.io

Education

Osmania University, Hyderabad 2023 – 2026
B.Sc in Data Science *GPA: 8.4/10*

Experience

Full Stack Developer Intern Mar 2026 – Present
Gaara AI (Nirmaan Pre-Incubator, IIT Madras)

- Architected production-grade full-stack systems on **FastAPI**, **React.js**, and **PostgreSQL** (SQLAlchemy ORM), enforcing modular service boundaries and async I/O for concurrent workloads.
- Containerized services with **Docker** and orchestrated zero-downtime deployments on **AWS EC2**, leveraging **S3** for object storage and static asset distribution.
- Hardened network infrastructure with **Nginx** reverse-proxy, **Cloudflare** DNS/WAF, DuckDNS, and **Certbot** for automated TLS certificate provisioning and renewal.
- Profiled and optimized backend hot paths — query indexing, connection pooling, and response caching — to sustain low-latency throughput under real-world traffic.

Projects

Webhook Mock Studio | *Dynamic API Platform* | *Django, DRF, React, JWT*

- Designed and shipped a production-deployed API mocking platform supporting on-demand endpoint generation with user-defined URLs, HTTP methods, and JSON payloads — live at webhook-mock-studio.vercel.app.
- Engineered a real-time observability dashboard surfacing request logs, latency telemetry, and traffic patterns to accelerate developer debugging cycles.
- Implemented stateless **JWT** authentication with silent access-token rotation and automated refresh cycles, eliminating mid-session re-authentication friction.

Secure Task Manager | *Full Stack Application* | *Django, DRF, React*

- Engineered **REST APIs** enforcing strict per-user data isolation through row-level access control and authorization middleware.
- Implemented protected SPA routing with a JWT *access/refresh-token* architecture and silent token rotation, mitigating session-hijack attack surface.
- Optimized ORM access patterns and indexing strategy to handle high-frequency CRUD operations with minimal query latency.

LLM-Powered AI Chatbot | *CRToperations* | *Python, Streamlit, LangChain*

- Developed a context-aware conversational AI agent capable of resolving multi-turn, domain-specific queries with persistent dialogue state.
- Integrated **LangChain** orchestration with LLM APIs to manage long-context conversation memory, prompt chaining, and intent-based intelligent routing.
- Delivered a responsive Streamlit interface with conversational state management and instant message rendering for an end-user-ready experience.

Technical Skills

Languages: Python, C
Backend & APIs: Django, Django REST Framework, FastAPI, REST APIs, WebSockets
Frontend: React.js, JavaScript, HTML5, CSS3
Databases: PostgreSQL, MySQL, SQLite
Cloud & DevOps: AWS (EC2, S3), Docker, Nginx, Cloudflare, DuckDNS, Linux, Git
AI / Data: LangChain, LLM APIs, NumPy, Pandas

Certifications & Achievements

Certifications: C Programming, MS Office