

Adinath M K

AI Backend Engineer — AI Systems — FastAPI — Django — Distributed Systems

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GitHub — LinkedIn — Portfolio

Professional Summary

Software Engineer with hands-on experience building production-grade AI systems, distributed backend architectures, and scalable cloud-native applications. Skilled in FastAPI, Django, PostgreSQL, Kafka, Redis, Docker, AWS, and modern AI technologies including LangGraph and RAG.

Technical Skills

Programming: Python, JavaScript, TypeScript, SQL

Backend: FastAPI, Django, Django REST Framework, Flask, REST APIs, Async Programming, JWT Authentication, RBAC, WebSockets

AI & LLM: LangGraph, OpenAI API, Prompt Engineering, RAG, AI Agents, TensorFlow, Keras, CNN, U-Net, Computer Vision

Distributed Systems: Apache Kafka, Redis, Celery, Debezium, Event-Driven Architecture, Microservices

Databases: PostgreSQL, Supabase, SQLAlchemy, Alembic, pgvector

Cloud & DevOps: Docker, Docker Compose, Kubernetes, Terraform, AWS EC2, AWS S3, AWS Lambda, AWS SQS, Nginx, Kong API Gateway, GitHub Actions, CI/CD

Search & Monitoring: Elasticsearch, Prometheus, Grafana, Structured Logging

Tools: Git, GitHub, Linux, Postman, VS Code

Concepts: System Design, API Design, OOP, Design Patterns, Performance Optimization

Projects

NeuralOps – AI-Powered Incident Analysis Platform

- Architected a multi-tenant AI debugging platform in FastAPI/Django to speed up root-cause analysis.
- Engineered an event-driven microservices backend using Kafka, Redis, PostgreSQL, and Docker.
- Deployed LangGraph agents, RAG, WebSockets, and JWT/RBAC security for real-time AI diagnostics.
- Automated IaC with [Terraform] and deployed [Prometheus/Grafana] to ensure high availability.

BookMyVenue – Venue Booking Platform

- Engineered a FastAPI and PostgreSQL backend featuring deep search and real-time querying.
- Built a dynamic pricing system that algorithmically adjusts rates based on booking trends.
- Developed secure venue management REST APIs utilizing JWT, Alembic, and Cloudinary.

ActiveCore – Enterprise Full-Stack Platform

- Developed a production-grade full-stack application using React, Django REST Framework, and PostgreSQL.
- Designed and integrated 60+ REST APIs with dynamic frontend components and state management.
- Implemented secure authentication, RBAC, and reusable modules following scalable software architecture.

Brain Tumor Detection using Deep Learning

- Built a U-Net-based medical image segmentation model using TensorFlow and Keras.
- Developed preprocessing and inference pipelines for MRI images.
- Deployed the model with FastAPI for real-time predictions.

Professional Experience

Software Development Intern – Bridgeon Solutions, Kozhikode

2025 JULY – Present

- Develop scalable backend applications using Django and FastAPI.
- Design REST APIs and integrate PostgreSQL databases.
- Build cloud-ready applications using Docker and AWS.
- Collaborate using Git and Agile development practices.
- Contribute to production-grade backend systems with a focus on scalability and maintainability.

Education

B.Tech in Computer Science and Engineering

2021 – 2025

College of Engineering Munnar

APJ Abdul Kalam Technological University