

Akash Ajay Kallai

Full-Stack Developer — Python Backend Specialist — AI/ML Engineer

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Professional Summary

Full-stack software developer with expertise in Python backend development, AI/ML integrations, and modern web technologies. Experienced in building scalable REST APIs, serverless applications, and production-ready systems using FastAPI, Django, React, and AWS. Strong foundation in data structures, algorithms, and database design. Passionate about open-source contribution, freelance projects, and solving complex technical challenges.

Technical Skills

- **Languages:** Python, JavaScript, TypeScript, SQL, C++, Bash
- **Backend:** FastAPI, Django, Flask, Node.js, Express.js, REST APIs, WebSocket, Microservices
- **Frontend:** React, Next.js, Tailwind CSS, Bootstrap, Redux, Responsive Design
- **Databases:** PostgreSQL, MySQL, MongoDB, Redis, SQLAlchemy, Alembic Migrations
- **AI/ML:** LangChain, RAG Architecture, NLP, LLM Integration, Vector Databases (FAISS, Chroma)
- **Cloud & DevOps:** AWS (Lambda, EC2, S3, RDS), Docker, CI/CD (GitHub Actions), Serverless, Nginx
- **Tools:** Git, pytest, Selenium, BeautifulSoup, Pandas, NumPy

Professional Experience

- **Freelance Full-Stack Developer — Self-Employed (Remote)** Nov 2024 - Present
 - Developed custom web applications and REST APIs for clients using Python, FastAPI, React, and AWS
 - Built AI-powered solutions with LangChain and LLM integrations, delivering production-ready systems in 2-week sprints
 - Implemented CI/CD pipelines and Docker containerization achieving 99.9%+ uptime for client applications
- **Python Developer Intern — TBTFW Ventures (Remote)** Jan 2025 - Mar 2025
 - Designed scalable REST APIs using FastAPI with JWT authentication, achieving 50% performance improvement
 - Managed PostgreSQL and MongoDB databases with proper schema design, relationships, and query optimization
 - Deployed serverless applications to AWS Lambda with automated testing and CI/CD using GitHub Actions
- **Backend Developer Intern — ShiasH Info Solutions (Remote)** Mar 2024 - Jun 2024
 - Developed Flask/FastAPI backend integrations for ML models, improving system accuracy by 12%
 - Optimized database queries and implemented caching strategies, reducing response times by 30%
 - Collaborated with cross-functional teams on API design, testing, and production deployments

Featured Projects

- **NutriTracker SaaS** — *FastAPI, AWS Lambda, PostgreSQL, React, Vercel* — Live Demo
Full-stack nutrition tracking platform with serverless backend, JWT authentication, meal logging, and personalized nutrition plans deployed with CI/CD.
- **ShipTrack Logistics Platform** — *FastAPI, PostgreSQL, AWS Lambda, Docker, GitHub Actions*
Serverless logistics management system with real-time tracking, inventory management, financial dashboards, and zero-downtime deployments.
- **AI Language Learning Assistant** — *FastAPI, LLM, Next.js, Docker, Tailwind CSS*
AI-powered conversational platform with real-time corrections, multi-language support, and personalized feedback using modern containerized architecture.
- **Expense Management System** — *FastAPI, PostgreSQL, Next.js, Docker, AWS*
Enterprise expense tracker with JWT auth, RBAC, budget monitoring, and financial analytics achieving 99.9% uptime.

Education

SRM Institute of Science and Technology, Chennai, India — B.Tech in Computer Science (AI/ML) — CGPA: 7.78/10 — Jun 2025

Relevant Coursework: Data Structures, Algorithms, Database Management, AI/ML, Cloud Computing, Software Engineering

SRS Gnyan Dham School, Vapi – 12th CBSE: 87.5% (2020, Science: PCM & Computer Science) | 10th CBSE: 81.6% (2018)

Certifications & Achievements

Certifications: IBM DevOps Professional — AWS Cloud Practitioner (In Progress) — Oracle SQL Essentials

Technical Achievements: 50%+ performance optimization — 99.9% uptime systems — 80%+ test coverage — Serverless deployments