AHMED KHAN

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SUMMARY

Backend engineer with hands-on experience building APIs and distributed backend systems in Python, TypeScript, and Go. Focused on reliability and performance, including idempotent workflows, event-driven services, caching, and observability. Experienced in delivering SaaS and fintech products from design to deployment, and in building AI-powered features with safety guardrails.

EDUCATION

BS Computer Science, Air University, IslamabadJun 2027 (expected)
Coursework: Data Structures & Algorithms, Database Systems, Operating Systems, Computer Networks

EXPERIENCE

Software Engineer, Data X Technologies · Islamabad, Pakistan (Hybrid)Jun 2026 – Present

- Designed and developed backend services, REST APIs, and database architectures for SaaS products, including FinPilot.
- Built and optimized features across backend and frontend in full-stack applications, improving API response times.
- Implemented CI/CD pipelines and managed AWS deployments.
- Integrated third-party services, AI APIs, and payment gateways.

Backend Developer Intern, Emumba · RemoteJul 2026 – Sep 2026

- Built the backend for SmartHealth, a clinical scheduling platform: API design, database schema, and migrations.
- Implemented idempotent booking and saga-based compensating workflows to prevent double-booking.
- Added tracing, metrics, and automated tests; worked in Agile sprints with code reviews.

PROJECTS

Basarat — AI Investment Intelligence Platform (PSX)Live | GitHub
Python · FastAPI · PostgreSQL · Redis · Celery · Docker · Oracle Cloud

- Built the async FastAPI backend for market data, portfolio risk analytics, and stock forecasting, with API latency under 50 ms using Redis caching.
- Integrated BiGRU and XGBoost forecasting models and FinBERT news sentiment into a stock recommendation engine.
- Built a RAG-based investment assistant with safety guardrails; deployed on Oracle Cloud with CI/CD and monitoring.

DocSense — Hybrid Search and Verified Document Q&ALive | GitHub
Python · FastAPI · PostgreSQL · pgvector · React · Supabase · Clerk

- Built hybrid retrieval fusing pgvector semantic search with PostgreSQL full-text search via Reciprocal Rank Fusion, reranked by a cross-encoder.
- Returned citation-grounded answers that abstain when documents lack evidence, with streaming responses in the UI.
- Built async ingestion for PDF, DOCX, XLSX, CSV, and JSON with OCR fallback; Clerk JWT auth with per-user isolation.

SmartHealth — Clinical Scheduling Platform (Emumba Internship)GitHub
Python · FastAPI · PostgreSQL · Redis · Celery · Kafka · Temporal · Docker

- Architected layered FastAPI services with JWT authentication and RBAC for four user roles.
- Integrated Celery reminders, Kafka events (transactional outbox), and Temporal multi-step workflows.
- Built an AI assistant that refuses medical advice and scopes PHI; tested offline with a FakeLLM harness.

FlowForge — Multi-Tenant Project Management SaaSLive | GitHub
Node.js · Express · MongoDB · React · TypeScript · Stripe

- Designed tenant-isolated architecture with workspace-scoped middleware and four-role RBAC.
- Built Stripe subscription tiers synced via verified webhooks, plus scheduled deadline automation and reporting.

SKILLS

Languages: Python, JavaScript, TypeScript, Go, SQL
Backend: FastAPI, Node.js, Express, PostgreSQL, pgvector, MongoDB, Redis, Celery, Kafka, Temporal
Cloud & DevOps: AWS, Oracle Cloud, Docker, Nginx, GitHub Actions, Prometheus, Grafana
AI: Machine Learning, Model Training, PyTorch, TensorFlow, GenAI, Agentic AI, CrewAI, RAG Pipelines