

Muhammad Khizar

Lead Backend Engineer

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Professional Summary

Lead Backend Engineer with 8+ years of experience scaling distributed systems and production AI infrastructure. I specialize in taking complex backend problems from architectural design to deployment and production reliability. Over my career, I have built multi-tenant SaaS platforms from the ground up, scaled event-driven pipelines for HRIS platforms serving 30k+ users, and architected real-time conversational AI backends with low-latency LLM orchestration.

Key Skills

Languages & Frameworks: Python (FastAPI, Django), REST APIs, Server-Sent Events (SSE)

- **Distributed Systems & Data:** PostgreSQL, MongoDB, Apache Kafka, Redis, Celery, ChromaDB / Vector DBs
- **AI & Integrations:** RAG & Vector Search, Multi-LLM Routing (OpenAI, Anthropic, Gemini), Marketplace Integrations (Shopify, Walmart, Amazon)
- **Cloud & Infrastructure:** AWS (ECS, Fargate, Lambda, S3, RDS), Docker, CI/CD, Multi-tenant SaaS Architecture

Professional Experience

Aineo (Swiss AI SaaS) | Switzerland (Remote)

Lead Backend Engineer (Contract) | May 2024 - Present

- Architect and maintain the core Python/FastAPI backend services powering real-time conversational AI workflows and document intelligence.
- Built multi-provider LLM routing architecture (OpenAI, Anthropic, Gemini) with SSE (Server-Sent Events) for low-latency streaming responses.
- Designed production RAG (Retrieval-Augmented Generation) pipelines, chunking strategies, and vector search workflows for large-scale document retrieval.

- Provisioned and managed cloud infrastructure adhering to strict Swiss data protection (DSG) standards and enterprise reliability requirements.
- Lead backend technical decisions across async queue processing, API contracts, and LLM evaluation benchmarks.

ALL3D | US (Remote)

Senior Backend Engineer (Contract) | Oct 2024 - Jul 2026

- Designed and implemented integration-heavy backend services connecting Shopify, Walmart, and Amazon marketplace ecosystems, handling complex API syncs and platform business logic.
- Integrated Google Gemini models to power AI-assisted asset workflows and image-generation features within a Shopify application.
- Built robust asynchronous task pipelines to handle bulk catalog processing, rate limiting, and third-party API webhook ingestion.
- Containerized and deployed backend services on AWS ECS (Fargate/Docker), ensuring scalable infrastructure, automated rollouts, and high availability in production.

Omni HR | Singapore (Remote)

Senior Backend Engineer | Oct 2022 - May 2024

- Engineered core backend modules and employee data pipelines for an AI-powered HRIS and payroll platform serving 30k+ users and 50+ enterprise organizations across Southeast Asia.
- Implemented Kafka-based event-driven synchronization for real-time HR workflows, attendance, and leave management.
- Built enterprise Lattice SFTP data ingestion pipelines, ensuring seamless automated syncing for enterprise customer directories.
- Reduced technical debt through systematic refactoring, improving code maintainability and developer onboarding.

Tintash / Camaradly | Lahore, Pakistan

Founding Backend Engineer (Camaradly) / Senior Software Engineer | Jan 2020 - Dec 2022

- Architected the multi-tenant backend from zero to launch for Camaradly (employee engagement, check-ins, performance reviews, and feedback platform).
- Implemented strict tenant data segregation, role-based access control (RBAC), and analytics processing 50k+ daily employee feedback events.

- Reduced feature delivery cycles by 40% through reusable API design patterns and automated testing.
- Optimized database queries and backend APIs, improving response times by 50% for core features.

Tintash | Lahore, Pakistan

Software Engineer | Mar 2018 - Dec 2019

- Delivered backend features for Embr Wave, improving Ruby on Rails backend performance by 25%.
- Automated HR workflows through backend integrations, reducing manual operational effort by 40%

Education & Certifications

- **AWS Certified AI Practitioner** - Amazon Web Services (February 2025)
- **Bachelor of Science, Computer Science** - National University of Computer & Emerging Sciences, Lahore (2013 - 2017)