

MUHAMMAD HASSAN ABBAS

Full-Stack AI Engineer | React & Python Systems Architect

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SUMMARY

Full-Stack AI Engineer specialized in architecting production-ready SaaS applications and scalable media pipelines. Deep expertise in building end-to-end systems using Python (FastAPI/Django) and React, with a focus on integrating AI as a force multiplier for product features. Experienced in distributed systems, async communication, and owning the entire engineering lifecycle for global remote startups—from system design to cloud-native deployment (AWS/Docker). Focused on delivering high-value, revenue-generating systems with clean, maintainable architecture.

SKILLS

AI & Systems: RAG (Retrieval-Augmented Generation), Vector Databases (Pinecone, pgvector), OpenAI (GPT-4.5, Whisper, TTS), ElevenLabs, Flux Schnell, FFmpeg Pipelines, Async AI Workflows, Prompt Engineering

Backend & Systems: Python (FastAPI, Django), Node.js, Laravel (PHP), RESTful APIs, GraphQL, Apollo Server, Redis/Queues

Cloud & DevOps: AWS (EC2, S3, RDS, SES), Docker, CI/CD (GitHub Actions), Linux Server Management, Automated Deployments

Frontend & UI: React.js, Next.js, TypeScript, Tailwind CSS, Alpine.js, Inertia.js

Databases: PostgreSQL, MySQL, MongoDB, Database Design & Optimization

Real-Time & Auth: WebSockets (Pusher/Reverb), Firebase (FCM), Stripe (Subscriptions), OAuth

Soft Skills: System Design, Technical Documentation, Product Ownership, Async Communication

EXPERIENCE

Software Engineer — Softpers, Lahore | Aug 2023 - Present

- Lead developer on high-impact projects, architecting scalable backend systems using Python, Node.js, and GraphQL.
- Engineered core components for diverse startups, including a short-video social platform and a public WiFi infrastructure system, prioritizing API performance, data integrity, and remote-first collaboration.

- Owned deployment and infrastructure management on AWS, implementing CI/CD patterns and ensuring 99.9% system uptime for production applications.
- Collaborated directly with stakeholders in an async, remote environment to translate product requirements into technical specifications.

PROJECTS

CloakMotion (AI Video SaaS) | Python, FastAPI, Laravel, FFmpeg, OpenAI, AWS

- Architected a distributed multimodal orchestration engine in Python, coordinating concurrent workflows across 5+ AI models (LLMs, TTS, Image Generation) to automate complex content synthesis.
- Reduced content processing time by 70% by engineering a high-performance async processing pipeline using FastAPI and Redis to manage high-latency AI tasks.
- Implemented a multi-tenant SaaS architecture in Laravel, integrating Stripe for automated subscription billing and direct API integrations for TikTok and YouTube publishing.
- Deployed and scaled the entire infrastructure on AWS, optimizing media storage and automating deployment pipelines for rapid iteration.

Home Energy Audit Platform | PHP, Laravel, React, RESTful API

- Senior Full-Stack Developer for the U.S.-based energy audit company, modernizing their core platform and improving operational efficiency.
- Architected real-time data synchronization using WebSockets (Pusher), enabling seamless cross-user collaboration on complex audit data.
- Engineered a secure licensing and subscription platform with Stripe integration, managing billing cycles for B2B clients.
- Designed and implemented a comprehensive analytics dashboard, providing stakeholders with data-driven insights through advanced reporting and visualization.

EDUCATION

Bachelor of Science, Computer Science — Virtual University of Pakistan — 2023