

Abdullah Mughees Backend & AI Engineer

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Profile

Backend & AI Engineer with 2+ years of experience building full-stack applications, scalable data pipelines, and AI-powered platforms. Skilled in backend architecture, API development, and real-time AI integrations using Python, Django, FastAPI, LangChain, React/Next.js, AWS, and Docker. Proven track record of improving performance by up to 40%, reducing manual effort by 80%, and delivering production-ready systems for startups and enterprises.

Professional Experience

Full Stack Developer

Neural Lines [🔗](#)

09/2025 – Present

Islamabad

Smart Water Meter Automation (IoT + AI Control System)

- Architected and implemented a **Python-based backend** using **FastAPI (async)**, **PostgreSQL**, **SQLAlchemy (async)**, and **Alembic**, handling **real-time meter ingestion, flow-rate calculations, relay/valve control, audit logging, and JWT-based role access**.
- Developed a **React-based frontend dashboard** for administrators and users to monitor meter usage, view analytics, control relays, and manage configurations in real time.
- Built **leak-detection analytics** (continuous usage, day/night patterns, historical baselines, configurable thresholds) with automated **email notifications**, reducing manual monitoring by **~70%**.
- Implemented **background schedulers and async tasks** for periodic meter polling and analytics processing, maintaining **99.9% service uptime** under continuous load.
- Containerized backend services using **Docker & Docker Compose**, managed environment isolation and database migrations, enabling **zero-downtime deployments** and cutting release cycles by **~65%**.

ShamelaGPT (Islamic Research & Fact-Checking AI)

- Designed and built an **LLM-powered Islamic research platform** with a **Python backend and React frontend**, enabling users to research, query, and fact-check classical Islamic texts with high accuracy.
- Preprocessed, normalized, and **vectorized a large Shamela.ws [🔗](#) corpus** into a **Vector Database**, enabling **low-latency semantic search**, precise retrieval, and scalable knowledge expansion.
- Implemented **RAG pipelines using LangChain**, delivering **context-aware, citation-backed responses**, reducing scholarly research and verification time by **60%+**.
- Architected the system for **scalability and growth**, supporting expansion to a **large and increasing user base** with optimized retrieval and inference workflows.
- Developed **secure full-stack APIs**, authentication flows, and **production deployment pipelines** using **Docker and cloud infrastructure**, ensuring **scalable inference, reliability, and production-grade releases**.

Full Stack Developer

06/2024 – 05/2025

Industry Rockstar AI

Remote, Dubai

- Developed **AI-driven platforms** using **FastAPI, Django, LangChain, PostgreSQL, Redis, and Next.js**, reducing manual workflows by **60–80%**.
- Built an **AI Thesis Review System** with vector search (**Pinecone/FAISS**), cutting evaluation time by **60%**.
- Engineered an **AI Course Generation pipeline** automating content and video production, reducing delivery timelines by **80%**.
- Deployed and maintained systems on **AWS (EC2, S3, Lambda)** with **Docker and CI/CD**, achieving **99.9% uptime**.

Backend & AI Developer

06/2023 – 07/2024

VERTICALSOLS

Pakistan

- Built **high-availability Django backends** supporting **10K+ daily transactions** using **PostgreSQL and Redis**.
- Integrated **Stripe payments**, real-time **WebSockets**, and **LLM-powered features** with LangChain/OpenAI APIs.
- Led **CI/CD and Docker-based deployments** on **AWS & GCP**, reducing deployment time by **70%** and manual errors by **85%**.

Projects

SONORIA AI

02/2025 – Present

Backend & AI Developer

- Led development of a **voice-AI B2C SaaS platform** using **FastAPI/Django, React/Next.js, Twilio, and AWS**, serving **100+ businesses**.
- Reduced AI inference costs by **75% (to \$0.06/min)** using **Model Context Protocol (MCP)** and context caching, enabling **200% scalability**.
- Delivered a production-ready system that helped secure **\$50,000 in seed funding**.

KodeReach

02/2024 – 05/2025

AI Developer

- Built a **LinkedIn AI prospecting platform** using **Django/FastAPI, Selenium, LangChain**, serving **100+ paying clients**.
- Automated outreach and lead qualification for **7,000+ prospects/month**, improving efficiency by **80%**.

Skills

Backend Development

FastAPI, Django REST Framework, Node.js, RESTful APIs, WebSockets, Flask, JWT

DevOps

Docker, AWS (EC2, S3, Lambda), GCP, Vercel, Firebase, Git, CI/CD

Tools

Postman, Insomnia, Stripe API, Twilio API, CRMS, Nginx, Celery

Databases

MySQL, MongoDB, PostgreSQL, Mongoose

Frontend Development

React.js, Next.js, JavaScript (ES6+), TypeScript

AI/Machine Learning

OpenAI API, LangChain, TensorFlow, PyTorch, Mistral, Model Context Protocol (MCP), Context Caching, AI Based Automations, Hugging Face

Education

Bachelor in Computer Science

08/2019 – 06/2023

FAST - NUCES