

Khuzaima Hassan

AI/ML Engineer | Data Science Graduate | Python Developer

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PROFESSIONAL SUMMARY

AI/ML Engineer and Data Science graduate with hands-on experience building machine learning, Generative AI, and MLOps solutions. Proficient in Python, SQL, FastAPI, cloud platforms (AWS, GCP), and LLM integration (Gemini, Groq, Qwen, Llama) for developing production-ready AI applications. Experienced in end-to-end ML pipelines, model deployment, and scalable AI systems through industry internships and real-world projects.

TECHNICAL SKILLS

- **Programming:** Python, SQL
- **Machine Learning:** Classification, Regression, Deep Learning, LSTM, XGBoost, LightGBM, SHAP, Feature Engineering, Model Evaluation, Cross-Validation, Model Monitoring, Pipeline Design
- **Generative AI & LLMs:** Gemini API, Groq API, LangChain, LangGraph, Qwen, Llama, RAG, FAISS, Vector Embeddings, Sentence Transformers, Prompt Engineering, GenAI App Development
- **Frameworks & Tools:** FastAPI, Streamlit, Git, GitHub Actions, Hopsworks, Hugging Face
- **Cloud & Deployment:** AWS (EC2, IAM), GCP (Compute Engine, GPU Instances), Render, Vercel, Docker
- **Databases & Visualization:** PostgreSQL, MySQL, Power BI, Pandas, NumPy, Matplotlib

PROFESSIONAL EXPERIENCE

10Pearls

Dec 2025 - Feb 2026

Data Science Intern

- Built and deployed an end-to-end MLOps pipeline for 3-day AQI forecasting, automating data ingestion, model retraining, and dashboard deployment.
- Automated data pipelines and model deployment workflows utilizing GitHub Actions.
- Trained and evaluated regression and classification models to forecast AQI levels, applying cross-validation to improve generalization.

Plus W

Apr 2025 - Sep 2025

Japanese Language & IT Internship

- Contributed to backend development by implementing database constraints and migration scripts that improved data integrity and consistency across environments.
- Provisioned and connected to AWS EC2 instances via Ubuntu, gaining practical exposure to AWS services and cloud infrastructure.

PROJECTS

TeleTabib - AI Telehealth Agent (Final Year Project)

- Architected an AI-driven telehealth voice agent using LangGraph and open-source LLMs to automate patient interactions.
- Built a RAG pipeline (FAISS + Sentence Transformers) over medical documents and ran Qwen on a GCP Compute Engine instance with an NVIDIA L4 GPU for efficient inference.
- Delivered a scalable, production-ready healthcare agent as part of a 4-person team under industrial supervision.

Job Finder AI - Full-Stack AI Job-Matching Platform [GitHub](#)

- Built a full-stack AI job-matching platform (Next.js, FastAPI, PostgreSQL/Supabase) with Gemini 2.5 Flash for resume parsing, ATS scoring, and cover letter generation.
- Implemented skills-gap analysis and a drag-and-drop tracker; deployed on Vercel and Render.

Risk Scoring Platform - End-to-End ML System [GitHub](#)

- Built and deployed a production fraud risk scoring platform using FastAPI and PostgreSQL, covering data ingestion, feature engineering, and model training.
- Implemented model versioning and drift-monitoring to track prediction distributions and flag performance degradation.

10Pearls AQI Predictor - MLOps Forecasting Pipeline [GitHub](#)

- Engineered a 3-day AQI forecasting pipeline; 32 features, 15 models (5 algorithms × 3-day horizons) tuned with Optuna.
- Automated hourly ingestion and daily retraining via GitHub Actions with Hopsworks; deployed to Hugging Face Spaces using Docker.

Insight Agent - LLM-Powered Data Analysis App [GitHub](#)

- Integrated Gemini API to answer natural language queries over datasets in real time, with a Streamlit dashboard for automated summaries and interactive Q&A.

EDUCATION

NED University of Engineering & Technology <i>B.S., Data Science</i> • GPA: 3.885/4.00 • Achievements: First Position in Academic Ranking • Coursework: Machine Learning, Cloud Computing, Database Systems, Algorithms	Sep 2022 - Jun 2026
Adamjee Government Science College <i>Intermediate</i>	Aug 2020 - Aug 2022
Usman Public School System <i>Matriculation</i>	Apr 2018 - Apr 2020

CERTIFICATIONS & LANGUAGES

- Machine Learning Scientist in Python (DataCamp)
- Google Data Analytics Professional Certificate (Coursera)
- Machine Learning Engineer (DataCamp)
- Python for Data Science, AI & Development (Coursera)
- Data Engineering Essentials (Coursera)
- Huawei HCIA (Datacom)

CERTIFICATIONS & LANGUAGES

- English (Professional)
- Urdu (Native)
- German (Elementary)
- Japanese (Elementary)