

MOIZ AHMED MANSOORI

AI Engineer | LLM Systems | RAG | Agentic AI

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SUMMARY

BS Artificial Intelligence graduate and AI Engineer with practical experience gained through three AI internships. Built LLM-powered applications, including multi-agent systems with LangGraph, self-correcting NL2SQL agents, and OCR automation pipelines achieving 95%+ extraction accuracy. Experienced in RAG pipelines, vector databases, and deploying end-to-end AI applications using FastAPI and Next.js.

EDUCATION

Bachelor of Science in Artificial Intelligence - BSAI

Sep 2022 - June 2026

DAWOOD UNIVERSITY OF ENGINEERING AND TECHNOLOGY, KARACHI

CGPA - 3.22

WORK EXPERIENCE

IT Intern (Software) - Atlas Battery Limited

Jan 2026 - Mar 2026

A leading battery manufacturing company focusing on innovative technologies

- Developed an AI-based Warranty Code Detection system using OCR, achieving 95%+ extraction accuracy and reducing manual validation time by 40%
- Engineered a LangChain and LlamaIndex-based agentic chatbot integrated with internal HR and maintenance documentation, eliminating manual document search for employees

Machine Learning Engineering Intern - CodeCelix (Part-time - Remote)

Nov 2025 - Mar 2026

- Trained and benchmarked multiple models (AdaBoost, XGBoost, BERT) across client datasets, selecting best-performing models based on accuracy and F1 score for deployment
- Built preprocessing and hyperparameter tuning workflows to handle imbalanced datasets across multiple ML tasks

Data Analysis Intern - Dawood University of Engineering & Technology

July 2025 - Aug 2025

- Developed real-time EEG signal preprocessing pipelines for BCI research using statistical ML methods, processing data from 109 subjects across multiple trial conditions
- Conducted exploratory data analysis on EEG datasets and contributed to internal documentation of pattern recognition findings for faculty-led research

PROJECTS

QueryMind — NL2SQL Agent System | LangGraph, FastAPI, PostgreSQL, Next.js

- Built a 7-node LangGraph NL-to-SQL agent with self-correction, retry loop, and semantic schema retrieval using pgvector + sentence-transformers
- Developed real-time observability dashboard tracking success rate, latency, retries, and full query trace replay
- Deployed full-stack system: FastAPI backend (Render), Next.js frontend (Vercel), PostgreSQL handling 100k+ rows

[Github](#) | [Live Demo](#)

AIRO — AI Research Orchestrator | LangGraph, FastAPI, MLflow, XGBoost, Next.js

- Architected a 6-agent LangGraph system automating the full ML pipeline — data ingestion to PDF reports — with a Critic Agent that detects overfitting and data leakage before evaluation
- MLflow tracking with parallel model training (ThreadPoolExecutor) and SHAP-based feature importance explainability
- Full-stack deployment: FastAPI (Render), Next.js 14 (Vercel), SSE real-time updates with Zustand state management

[Github](#) | [Live Demo](#)

AI Research Paper Analyzer | RAG, Python, Flask

- Developed custom RAG pipeline to extract summaries, insights, and citations from research PDFs.
- Built REST API backend with Flask and integrated with frontend interface.
- Implemented document embedding and vector search architecture for semantic retrieval

[Github](#) | [Live Demo](#)

SKILLS

- LLMs & Agentic AI:** LangChain, LangGraph, LlamaIndex, OpenAI Agents SDK, RAG, ChromaDB, Prompt Engineering, LLM Integration, Transformers
- ML & Data Science:** Python, Pandas, NumPy, Scikit-learn, XGBoost, AdaBoost, BERT, MLflow, SHAP, Feature Engineering, EDA, Statistical Analysis, SQL
- DevOps & Tools:** FastAPI, Flask, REST APIs, Docker, Kubernetes, Git/GitHub, PostgreSQL, Postman, CI/CD

CERTIFICATIONS

- Google AI Professional Certificate – Coursera (Google) | [View certificate](#)
- Google Prompting Essentials – Coursera (Google) | [View certificate](#)
- Certified Cloud Applied Generative AI Engineer (GenEng) at Governor House (GIAIC) | Present