

# MOHAMMED YASEEN AHMED KHAN

## AI / ML Engineer | Backend & Enterprise AI Systems

Hyderabad, India | Open to Relocation

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### SUMMARY

**AI/ML Engineer** building backend-driven, enterprise-style AI systems with focus on **RAG** and **agent-based workflows**. Experienced in **Python**, **FastAPI**, **embeddings**, and **vector retrieval (FAISS)**. Contributed **merged pull requests to the LangChain retrievers module**. Interested in scalable **LLM-powered systems** and applied AI infrastructure.

### EXPERIENCE

#### AI/ML Engineer (Junior)

Five Seven IT Solutions | Sept 2024 – Feb 2025

- Worked on **backend-driven machine learning workflows** supporting **enterprise analytics and AI use cases**
- Built and maintained **Python-based ML pipelines** for data preprocessing and model execution
- Developed and tested **REST APIs** using **FastAPI** for **model inference and data access**
- Performed **data preparation and validation using SQL** for feature extraction and analysis
- Collaborated on deployment-ready **ML components** and cross-functional alignment with business and client requirements

### PROJECTS

#### Enterprise Document Question Answering System (RAG)

- Built a **Retrieval-Augmented Generation (RAG)** system for querying enterprise documents using natural language
- Implemented document ingestion, **semantic chunking**, **embeddings**, and **FAISS-based vector search**
- Integrated large language models to generate **grounded, source-aware responses**
- Designed backend services with a focus on **enterprise knowledge access, auditability, and explainability**

#### Agentic Customer Success Bot for SaaS Platforms

- Designed and built an **agent-based AI system** to automate customer support workflows for SaaS platforms
- Implemented intent **classification and routing logic** to delegate user queries to specialized agents
- Developed a RAG-based knowledge retrieval component using embeddings and FAISS

- Integrated backend orchestration **logic** to coordinate **multi-agent** responses in a structured **workflow**
- Focused on modular architecture, reliability, and enterprise-style AI system design

### **Production-Grade ML Monitoring System for Employee Attrition**

- Built an end-to-end machine learning system for employee attrition prediction with emphasis on post-deployment monitoring and model reliability
- Designed and implemented data drift and prediction drift detection using statistical techniques such as Population Stability Index (PSI) and Kolmogorov–Smirnov tests
- Developed a FastAPI-based inference service with structured prediction logging to monitor input feature distributions and model outputs
- Implemented alerting and retraining-readiness logic to flag model degradation and support production-style ML lifecycle management

### **Open Source Contributor – LangChain (Merged PRs)**

- Contributed to the **langchain\_classic.retrievers** module in **LangChain**.
- Added defensive validation logic to **EnsembleRetriever**, improving configuration robustness.
- Improved documentation clarity for **MultiVectorRetriever**.
- Worked within strict CI constraints (Ruff linting, formatting, multi-version testing).
- Successfully navigated review process; PRs merged into master branch.
- GitHub: [github.com/MohammedYaseenAhmedKhan](https://github.com/MohammedYaseenAhmedKhan)

## **TECHNICAL SKILLS**

**Programming & Backend :** Python, SQL, FastAPI, REST APIs

**AI & ML Systems :** ML Pipelines, Feature Engineering, Model Evaluation, **RAG, Embeddings, FAISS, Agent-Based Systems**

**Enterprise & Deployment :** Modular Architecture, API-based Services, **Docker (Basics), CI/CD (Basics), Monitoring Concepts**

**Tools :** Git, GitHub, Linux, Streamlit

## **EDUCATION**

Bachelor of Engineering in Artificial Intelligence & Machine Learning Poojya Doddappa Appa College of Engineering | 2021 – 2025

Professional Program – Data Science & Artificial Intelligence (Ongoing) | Imarticus Learning

## **CERTIFICATIONS**

Oracle OCI – AI Foundations Associate | NPTEL (Cloud Computing) | Cisco (IoT)