Aniket Deshmukh

+91 9766731487 | adeshmukh2407@gmail.com | [LinkedIn](#) | [Github](#)

EXPERIENCE

Python Developer   November 2023 – Present
Tata Consultancy Services   *Pune, MH*

1. UBS AG Group

   - Developed and optimized data transformation pipelines for processing documents into a structured format.
   - Applied business rules for data extraction, transformation, and integration with secure storage servers.
   - Enhanced system performance by implementing efficient data processing algorithms.

2. Nissan Motors Corp.

   - Developed an AI-powered Customer Support Bot using Azure AI Search and OpenAI GPT models.
   - Implemented Retrieval-Augmented Generation (RAG) to improve AI-driven responses with indexed document retrieval.
   - Built scalable cloud-based solutions using AWS, PySpark, and SQL, optimizing data handling and performance.

PROJECTS

AI Duologue *(Python, LLM APIs)*
- A real-time AI conversation system where Meta Llama 3-70B and GPT-4o-mini engage in structured discussions on any topic using dynamic prompts.
- Developed a streaming AI interaction loop in Python, enabling continuous dialogue between the two models.
- Designed a customizable prompt framework to experiment with different discussion styles, debates, and AI personas.

Retrieval-Augmented Generation (RAG) Pipeline Using Azure OpenAI *(OpenAI, Hugging Face, LangChain)*
- Built a RAG pipeline using Azure OpenAI GPT-4o, Hugging Face embeddings, and ChromaDB for context-aware LLM responses.
- Implemented semantic search with vectorized document retrieval and optimized document chunking for improved accuracy.
- Developed an interactive Gradio chatbot UI with multi-turn conversation memory using LangChain.

Development of Digital Twin for Real-time Condition Monitoring *(Python, C++, Unity)*
- Built a digital twin of a lathe machine using Microsoft Azure, enabling real-time condition monitoring and predictive maintenance.
- Implemented machine learning models (SVM, Random Forest, Decision Trees, Logistic Regression) on Azure to predict tool failures.
- Developed an interactive 3D visualization dashboard, highlighting Azure's capabilities in predictive analytics for industrial systems.

TECHNICAL SKILLS

Languages: Python, SQL, C++
Machine Learning & Data Science : NumPy, Pandas, Matplotlib, PySpark, RAG (LangChain, LLMs)
Cloud & Big Data : Microsoft Azure, AWS, Hadoop, PySpark

EDUCATION

Sardar Patel Insitute of Technology   Mumbai, MH
Minors in Computer Science   *Jan 2021 – Dec 2022*

Sardar Patel College of Engineering   Mumbai, MH
B.Tech in Mechanical Eng.   *Aug 2019 – June 2023*

CERTIFICATIONS

AZ - 900 - Azure Fundamentals
AI - 900 - Azure AI Fundamentals