# MOHAMMAD GHAZI UL ISLAM

## *GENERATIVE AI ENGINEER*

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## PROFILE

**Generative AI / Data Science Professional** with hands-on experience in building end-to-end AI solutions using Machine Learning, Deep Learning, Large Language Models (LLMs), NLP, and speech technologies. Skilled in designing pipelines from data ingestion and model development to API deployment and cloud-based demos. Experienced in prompt engineering, LLM orchestration, evaluation metrics, and integrating AI systems into business workflows. Passionate about building intelligent, scalable, production-ready AI applications with measurable impact and collaborating with AI and product teams to solve real world problems.

## WORK EXPERIENCE

**Generative AI Intern**                                                07/2025 – 12/2025
*Full Stack Academy*                                                    Hyderabad

- Implemented a Retrieval Augmented Generation (RAG) system pipeline using LangChain, for Document Q&A.

- Sentiment Analysis of Text Data using LSTMS.

- Exploratory Data Analysis and Visualization.

- Comparative Analysis of Machine Learning Classification Models.

## PROJECTS

**AI Voice Assistant / Speech Bot**
- Designed and developed an **end-to-end AI voice assistant** integrating **Speech-to-Text (STT), Large Language Model (LLM) reasoning, and Text-to-Speech (TTS)** components.
- Implemented a **real-time voice processing pipeline** to convert user audio into text, perform contextual reasoning using LLMs, and generate **human-like synthesized speech responses**.
- Engineered **prompt-based reasoning logic** to support **multi-turn conversations**, contextual queries, and dynamic response generation.
- Built **RESTful APIs using FastAPI** for audio processing, model inference, and conversational orchestration with **low-latency performance**.
- Developed an **interactive Streamlit web application** enabling seamless voice-based user interaction.
- Integrated **error handling, response validation, and latency optimization** to ensure production-ready conversational flow.
- **Containerized the application using Docker** and deployed on **cloud infrastructure**, demonstrating real-world deployment of multimodal AI systems

**LLM-Powered Chatbot Application**
- Designed and developed an interactive chatbot using **GPT, LLaMA, and Gemini APIs** to handle natural language queries.
- Implemented **prompt engineering strategies** to improve response accuracy, contextual understanding, and task completion.
- Built user-friendly interfaces using **Streamlit and Gradio** for real-time interaction and rapid prototyping.
- Optimized prompt flows and response handling to reduce latency and improve user experience.

**Retrieval-Augmented Generation (RAG) System**
- Built a **production-style RAG pipeline** combining LLMs with external knowledge sources for accurate, context-aware responses.
- Implemented document ingestion, chunking, and embedding using **LangChain / LlamaIndex**.
- Integrated **vector databases (FAISS / Pinecone)** for semantic search and efficient retrieval.
- Evaluated retrieval relevance and response quality to reduce hallucinations and improve factual grounding.

## SKILLS

**Generative AI**
LLM integration (GPT, LLaMA, Gemini), prompt engineering, RAG systems, vector databases (FAISS, Pinecone), fine-tuning, AI safety

**Machine Learning**
Feature engineering, model evaluation, hyperparameter tuning, classification, regression, ensemble methods.

**Deep Learning**
CNNs, transformers, transfer learning, attention mechanisms, sequence modeling

**Natural Language Processing**
Text preprocessing, embeddings, language model fine-tuning, NER, sentiment analysis, speech integration, Bag of Words, Lemmatization, LSTM, RNN, Stopword Removal, Tokenization

**Libraries & Frameworks**
LangChain, LlamaIndex, TensorFlow, PyTorch, Hugging Face, scikit-learn, Streamlit, Gradio

**APIs**
OpenAI API, Anthropic API, Google Gemini API, REST API integration, API authentication and management, prompt API optimization

**Data Tools**
Pandas, NumPy, SQL, data visualization, Git, API integration

**Soft Skills**
Problem Solving, Agile Development, Analytical Thinking, Technical Communication, Cross-functional Collaborative development, Rapid learning

## EDUCATION

**Bachelor of Architecture (B.Arch)**
*University of Mumbai*