

# Mohammed Harshath SS

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## Professional Summary

AI Developer (9 months) specializing in **GenAI backend development** and **distributed systems**. Expertise in building scalable **LLM inference platforms**, **multi-agent orchestration**, and **RAG pipelines** with strong focus on performance optimization and production reliability.

## Professional Experience

### OPSEN

AI Developer

London, UK [Remote]

Oct 2025–Present

- Integrated **ClickHouse database** with multi-agent architecture, enabling high-speed analytics and scalable data storage for AI-driven risk models.
- Implemented **LLM-powered RAG workflows**, enhancing document comprehension and policy analysis accuracy by **40%**
- Developed and deployed **intelligent AI agents** with tool-based reasoning and Dynamic Task Execution for risk management simulations
- Built production **legislative automation system** using **LangGraph + RAG pipelines**, reducing processing latency by **30%**

## Academic Projects

### AI AGENT–INVESTMENT ADVISORY SYSTEM

LangChain, LlamaIndex, FastAPI

- Developed a personalized investment advisor using **LangChain/RAG** and **transformer models** for predictive stock analysis, delivering accurate, tailored forecasts and suggestions.
- Built **containerized inference API** using **FastAPI + Docker** with 99.9% uptime for scalable model serving

### VOICEGPT – MULTILINGUAL VOICE - BASED AI ASSISTANT

HuggingFace, RAG, Ollama, VEM

- Developed an end-to-end multilingual AI voice assistant (Tamil & Marathi support) using **Wav2Vec2** for accurate Speech-to-Text and **MMS-TTS** for natural Text-to-Speech generation.
- Implemented an offline, **privacy-focused system** that processes data locally, **utilizing fine-tuned transformer** models for intent classification and **Retrieval-Augmented Generation (RAG)** with Sentence Transformers to provide real-time, contextually relevant answers.

## Technical Expertise

**Programming:** Python, SQL, Bash

**GenAI & LLM:** LangChain, LangGraph, AutoGen, vLLM, HuggingFace, RAG Pipelines, Multi-Agent Systems

**Backend:** FastAPI, Celery, Redis, Docker, PostgreSQL, REST APIs, Microservices

**AI/ML:** PyTorch, BERT, Transformers, Model Fine-tuning, Vector Databases, MLOps

**Cloud & DevOps:** Docker, Kubernetes (Learning), GCP, AWS, Distributed Systems

## Achievements

**GATE 2024 (Data Science & AI):** All India Rank 2852 (Top 5% nationally) **Technical Impact:** Delivered 10x performance improvements; reduced latencies by 30-40% across production systems

## Education

### Kathir College of Engineering

Bachelor of Technology in Artificial Intelligence & Data Science

Coimbatore, India

2021 – 2024

- **CGPA:** 8.02/10 | Relevant Coursework: ML, Deep Learning, DSA, Database Systems

## Certificates

- **Master Data Science** - IITM GUVI, Dec 2024
- **Advanced Programming Professional** - IITM GUVI, Dec 2024