

Muaaz Shaikh

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Portfolio: muaazshaikh.com | LinkedIn: linkedin.com/in/muaazshaikh12 | GitHub: github.com/MuaazSM

Education

NMIMS MPSTME, Mumbai

B.Tech Computer Science & Business Systems

2024–2028

CGPA: 9.30

Technical Skills

Languages: Python, C++, Java, Javascript/Typescript, SQL

AI/ML: LangChain, LangGraph, RAG, PEFT/LoRA, Hugging Face, TensorFlow, PyTorch

Backend Systems: FastAPI, WebSockets, API Design, Service Architecture

Frontend Engineering: Next.js, React, TypeScript, Tailwind CSS

Databases & Search: PostgreSQL, MongoDB, Neo4j, Redis, FAISS, BM25

Cloud/DevOps: Docker, Kubernetes, Amazon Web Services, Vercel, Render

Tools: Git, GitHub, Apache Kafka

Experience

Freelance AI Engineer | Client Project

Nov 2025–Feb 2026

- Built multilingual AI voice calling system automating payment follow-ups and improving collection efficiency by **80%**
- Integrated Twilio, Vapi, WebSockets, and FastAPI for real-time low-latency conversations
- Developed LLM pipelines extracting payment intent, sentiment, disputes, and call outcomes
- Engineered async backend workflows with scheduling, retries, and rate-limited orchestration

Research Intern | NMIMS MPSTME

May 2025–Present

- Co-authored an IEEE-format research paper on **Janus**, an intrusion detection system; designed the full data pipeline over 2.8M network flow records and validated three adversarial model variants on live simulated traffic — paper under review
- Built end-to-end data pipelines for Indian legal judgment research, transforming unstructured court documents into structured datasets for downstream ML workflows

Projects

Graphene | AI-Powered SOC Investigation Copilot

Live Demo

- Built full-stack cybersecurity investigation platform using React, FastAPI, Neo4j, and graph analytics
- Correlated identity, network, and cloud telemetry to prioritize actionable incidents from high-volume alerts
- Integrated Adversarial anomaly detection pipeline for zero-day threat surfacing
- Designed AI copilot generating evidence-backed investigations where outputs map to Cypher queries
- Added streaming responses and multi-LLM fallback architecture for reliable uptime

Lorri AI | Agentic Logistics Optimization System

Live Demo | GitHub

- Built ML + Operations Research platform improving fleet utilization to **94.6%**
- Combined RandomForest demand prediction ($F1 = 0.93$) with OR-Tools route optimization
- Designed explainable agentic decision workflows for dispatch optimization
- Implemented scenario simulation engine for dynamic routing strategies

Serene | Multi-Agent Mental Health AI Assistant

Live Demo | GitHub

- Built multi-agent conversational AI system using LangGraph orchestration
- Designed hybrid RAG pipeline using FAISS + BM25 with source-grounded responses
- Implemented multi-layer memory including episodic, long-term, and semantic recall
- Achieved low-latency responses (**1.2–1.5s**) across multi-turn conversations
- Added safety guardrails and escalation logic for high-risk emotional states

Achievements

- Winner — Open Paws Data Visualization Hackathon Apr 2026
- Winner — ACM Semicode Coding Contest Apr 2026
- First Runner-Up — KODE-IET Hackathon Finale Apr 2026
- Winner — Build for Billions IndiaStack Hackathon (NITK Surathkal) Nov 2025
- 2nd Runner-Up — Taqneeq CyberCypher 5.0 Mar 2026
- Runner-Up — IEEE HackXplore Hackathon Nov 2025
- Runner-Up — IETE SF ACE Aug 2025

Certifications

Deep Learning Specialization — DeepLearning.AI

Machine Learning Specialization — DeepLearning.AI

Data Science Professional Certificate — IBM