Shaik Abdulla

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Professional Summary

AI Engineer (2+ years) specialized in architecting and delivering **end-to-end LLM/RAG solutions** and full-stack AI applications. Proven expertise in the complete product lifecycle: from **feasibility analysis and data engineering** to **model fine-tuning (Transformers, YOLO11)**, high-performance **API development (FastAPI)**, and responsive **UIs (React/Next.js)**. Adept at owning MVPs, driving rapid Agile iterations, and deploying production-grade systems involving **vector search (Qdrant/ChromaDB)** and complex document intelligence.

Skills

AI & Machine Learning: LLMs, RAG Architecture, YOLO11, LangChain, FAISS, Cross-Encoders, Transformers, Whisper, Fine-tuning, Guardrails
Backend & Database: Python, FastAPI, PHP, SQL (Oracle, MS SQL, PostgreSQL), MongoDB, Vector DBs (Qdrant, ChromaDB), ETL Pipelines, RESTful API Design
Frontend & Web: React, Next.js, Angular, Node.js, JavaScript, TypeScript, HTML5/CSS3
DevOps & Security: Docker, Red Hat OpenShift, GCP Vertex AI, Azure OpenAI, mTLS Security, Git/GitHub, RBAC, CI/CD, Power BI

Experience

Senior Software Engineer (AI/ML) — Product Development *Bengaluru*
Federal Bank – FedServ *Sept 2024 – Present*

- Engineered an end-to-end document intelligence pipeline using **Llama 3.1, Qdrant, and Cross-Encoders**; achieved **95% accuracy** in extracting 11+ fields from diverse insurance formats.
- Custom-trained and deployed **YOLO11s** computer vision models for signature and stamp detection, implementing parallel inference pipelines with **OpenCV** for production-scale verification.
- Architected a **Hybrid RAG pipeline** combining dense vector search with **BM25 retrieval** and cross-encoder reranking to optimize precision for domain-specific terminology.
- Developed a **multi-heuristic confidence engine** and fuzzy entity resolution logic to automate maker-checker workflows across six weighted risk dimensions.
- Built and containerized an async **FastAPI** backend with **Oracle DB** and mTLS-secured integrations, serving 37,000+ employees across 1,200+ branches via **Red Hat OpenShift**.

Data Scientist (Full-Stack AI) *Hyderabad*
Dzitalinfo *May 2024 – Aug 2025*

- Architected production **RAG systems** using **LangChain, FAISS, and GPT-3.5 (Azure OpenAI)** to automate customer support and information retrieval from internal knowledge bases.
- Developed and scaled full-stack management platforms including **Inventory** and **Restaurant Order Management** systems using **React, Angular**, and **PHP**.
- Optimized **MS SQL Server** performance for a retail **Billing System**, implementing advanced indexing and query optimization to handle high-frequency transaction data.
- Strengthened application security by implementing **RBAC (Role-Based Access Control)** and secure API authentication protocols across diverse client web applications.

Data Science Intern *Hyderabad*
Dzitalinfo *Nov 2023 – Apr 2024*

- Boosted LLM response reliability by **30%** through advanced prompt engineering, utilizing **Chain-of-Thought (CoT)** and **Few-Shot learning** for complex customer query resolution.
- Built a web-based **Attendance Management System** for a collegiate client, integrating a responsive frontend with a robust **SQL** backend for real-time reporting.

Freelance & Consulting

AI Developer *Remote*
American Society for Reproductive Medicine (NGO)

- **MAC Tool:** Built educational platform with Next.js (100+ pages, 1700+ components) and integrated GenAI chatbot for context-aware assistance.

- **Edge Tool:** Developed interactive grading tool with real-time data visualizations and AI-powered guidance.

AI & Blockchain Consultant *Remote*
KonmaDAO

- **Skybrain Neurotech:** Prototyped AI-driven neurotechnology platform for signal processing and pattern recognition.
- **Estateledger:** Architected blockchain ledger system for secure real estate transactions.

Projects

Brain Tumor Research Chatbot (RAG) *ChromaDB, LangChain*

- Built RAG chatbot providing context-aware answers from top 100 brain tumor research papers using ChromaDB vector search and SQL pipelines.

Real-Time Transcription & Diarization *Whisper, PyTorch* *demo*

- Developed speech-to-text application with OpenAI Whisper, optimizing data workflows for real-time extraction.

Avarta — Sustainability App *Gemini API, Highest Voted* *showcase*

- Won Highest Voted App award for AI-powered recycling solution using Google Gemini API.

Education

GMR Institute of Technology — *B.Tech in Information Technology* *Sept 2020 – Apr 2024*

Apex Junior College — *Higher Secondary Education (PCM)* *Aug 2018 – Apr 2020*

The Sun School — *Secondary School Certificate (SSC)* *July 2017 – Apr 2018*

Publications

ProteinFlex: AI-Driven Protein Flexibility Analysis (Under Review)

- Developed transformer-based framework with molecular dynamics simulations for protein flexibility prediction, enhancing drug discovery workflows.

Versatile Digital Identity ISSN 2582-7421

- Proposed decentralized identity solution using Ethereum blockchain, ERC-721 NFTs, and IPFS for secure verification.

Certifications

Applied NLP — Microsoft 2024

Blockchain and its Applications — NPTEL (IIT Kharagpur) 2022

Machine Learning Foundations — AWS Academy 2022