Mirza Umar

FULL-STACK AI & SYSTEMS ENGINEER

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SUMMARY

Full-Stack AI & Systems Engineer building production-ready applications, enterprise integration pipelines, and applied AI systems. Focused on pragmatic software architecture across Python, TypeScript, and Node.js: connecting modern language models and computer vision pipelines to reliable backend services, secure authentication flows, and real-world databases.

TECHNICAL STACK

Languages:	Python, TypeScript, JavaScript, SQL
Backend & Systems:	FastAPI, Node.js, Express, PostgreSQL, REST APIs, OAuth 2.0
Applied AI & Vision:	PyTorch, TensorFlow, Keras, LangGraph, LlamaIndex, vLLM, Gemini API
Frontend & Infra:	Next.js, React, Tailwind CSS, Docker, Railway, Linux, Git

FLAGSHIP PROJECTS

Dynamics 365 Integration Bridge

Live Production Deployment

Node.js • Express • Azure Active Directory • OAuth 2.0 • Dynamics 365 Web API • Railway

- Architected and shipped an Express middleware bridge that ingests inbound external web form submissions and pushes them directly into Microsoft Dynamics 365 CRM without manual re-entry.
- Engineered automated OAuth 2.0 token acquisition and refresh flows using Azure Active Directory service credentials.
- Built strict payload schema validation, sanitized incoming inputs, and implemented field mapping logic for custom CRM option sets with isolated error boundaries.

TumorVision: Multimodal Brain MRI Diagnostic Support

Applied AI System

Python • TensorFlow • Keras • Xception CNN • Google Gemini API • Streamlit

- Trained and deployed a transfer learning pipeline utilizing an Xception convolutional neural network to classify brain MRI scans across 4 distinct categories.
- Integrated Gemini 1.5 Flash to automatically interpret predictive probability distributions and generate clear diagnostic reasoning based on visual scan characteristics.
- Shipped an interactive, responsive Streamlit web application providing real-time inference, scan visual inspection, and structured prediction summaries.

EXPERIENCE & EDUCATION

AI Systems & Integration Engineer | Independent / Client Work

Jan 2025 – Present

- Partner directly with teams and founders to deliver full-stack features, middleware services, and production AI integrations.
- Build and deploy containerized microservices and automated API bridges with emphasis on uptime, secure authentication, and clear operational logging.

Artificial Intelligence Trainee | Samsung Innovation Campus

Oct 2024 – Jan 2025

- Completed intensive 3-month technical program focused on neural network architectures, machine learning mathematical foundations, and computer vision.
- Built and evaluated image classification models, feature engineering pipelines, and interactive deployment prototypes.
- Received the Best Social Impact Project Shield and ranked in the top 2 nationwide.