

SALMAN KARIM

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OBJECTIVE

Collaborative AI/ML Solutions Engineer specializing in Data Engineering and Systems Architecture. A strong cross-functional team player experienced in building end-to-end Medallion Architecture pipelines, Agentic AI workflows, and production-ready APIs to drive measurable business impact.

EDUCATION

Bachelor of Computer Science, SZABIST, Islamabad

2020 - 2024

SKILLS

AI & Machine Learning	LangChain, LangGraph, RAG Pipelines, XGBoost, ML Drift Monitoring
Data Engineering	Python, PySpark, Databricks (DABs), dbt, SQL, Medallion Architecture
Frontend & Full Stack	React, Next.js, React Native, Tailwind CSS, TypeScript
Backend & DevOps	FastAPI, SciPy, Node.js, Firebase, AWS, Vercel, GitHub Actions

EXPERIENCE

Machine Learning Engineer | Data Engineering & Systems Architecture
Medical Guardian

Feb 2026 - Jul 2026
Philadelphia, PA (Remote)

- Deployed a FastAPI REST API with <10ms inference latency for real-time alert classification, reducing false alarm dispatches by 54% and saving an estimated \$144K annually.
- Architected scalable Medallion Architecture workflows (Bronze → Silver → Gold) utilizing PySpark and Databricks Asset Bundles (DABs) to orchestrate ETL pipelines across dev and qa environments.
- Built production XGBoost pipelines for 30/60/90-day Fall Risk and Member Engagement models, implementing group-aware temporal splitting and adaptive decision thresholds to maintain $\geq 70\%$ recall.
- Engineered schema-driven scoring systems (Independence Profile MCDA and Longevity IRT) that processed raw Salesforce data and externalized clinical weights to JSON configs, ensuring strict AI explainability.

AI and Digital Solutions Engineer
Special Technology Zones Authority (STZA)

Oct 2025 - Feb 2026
Islamabad, Pakistan

- Led the full-stack revamp of the official STZA web platform, improving accessibility and integrating a custom AI-powered chatbot to automate user support queries for licensees.
- Designed and deployed intelligent automation workflows using LangChain, n8n, and Python to optimize internal operations and data retrieval.

Full Stack Software Engineer
Beyond Future Group

Jun 2024 - Sep 2025
Islamabad, Pakistan

- Built and deployed cloud-native, high-performance web applications using Next.js 14, React, and Tailwind CSS.
- Integrated Firebase Auth, Firestore, and Cloud Functions for real-time synchronization and secure user authentication.
- Automated deployments with GitHub Actions and managed hosting infrastructure across AWS, DigitalOcean, and Vercel.

PROJECTS

ML Drift Monitoring & Backtesting Pipeline. Engineered a statistical QA backtesting framework for delayed-label environments. Implemented Population Stability Index (PSI) and Kolmogorov-Smirnov (KS) tests to detect feature distribution shifts and enforce strict >65% recall alerting thresholds.

Hospital Proximity Geospatial Engine. Built a Python ETL pipeline integrating US Census APIs and HIFLD datasets to enrich account data. Utilized SciPy's *cKDTree* for high-performance spatial nearest-neighbor lookups, outputting data to interactive Canvas-rendered Leaflet maps.

LangGraph Multi-Agent Travel Planner. Orchestrated a 3-agent AI workflow using LangGraph, Gemini 2.5 Flash, and FastAPI to generate dynamic itineraries. ([GitHub](#))

Hunza RAG Itinerary System. Built an AI travel advisor utilizing a RAG pipeline with structured chunking, embeddings, and a clean source citation system. ([GitHub](#))

TRAINING & CERTIFICATIONS

- **Kartoa Technologies (Aug. 2025 - Nov. 2025):** AI Development Internship focused on building autonomous AI agents via LangChain and RAG systems.
- [View Full Certifications Profile on LinkedIn](#)