

MUHAMMAD AHMAD ALI RAZA

Enterprise AI Systems Engineer & AI Solutions Architect

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EXECUTIVE SUMMARY

Enterprise AI Systems Engineer and Solutions Architect with **15+ years** building the software that runs inside large, regulated organizations — with recent work centered on **agentic AI**.

At **Emirates NBD**, designs multi-agent systems and conversational banking experiences that turn manual, human-operated processes into **governed, AI-assisted workflows**. Earlier led engineering for an **enterprise AI governance platform** that gave organizations the controls, guardrails, and auditability to deploy AI responsibly.

Across banking, AI governance, and enterprise SaaS, has owned architecture end to end — from **cloud-native foundations on AWS** to the orchestration layers connecting language models to real business systems. Pairs the depth of a principal engineer with the judgment to put AI into production where **reliability, security, and compliance** are non-negotiable.

SELECTED IMPACT AREAS

Enterprise Banking AI — Agentic workflows and conversational banking that automate regulated customer service across digital channels.

AI Governance Platforms — Policy enforcement, guardrails, and auditability for enterprise AI models and autonomous agents.

Agentic & Generative AI — Multi-agent orchestration, LLM integration, and retrieval-augmented systems delivered into production.

Cloud Architecture — Cloud-native, event-driven systems and CI/CD pipelines built on AWS.

Platform Modernization — Re-architecting SaaS products for scale, maintainability, and a stronger user experience.

CORE EXPERTISE

- Agentic AI & Multi-Agent Systems
- AI Governance & Controls
- Generative AI & LLM Integration
- Conversational AI
- AI Workflow Orchestration
- AWS Cloud Architecture
- Microservices & Distributed Systems
- Enterprise SaaS Platforms
- System Design & Technical Leadership

TECHNOLOGY

AI: LangGraph, RAG, LLMs, AI Orchestration

Backend: Node.js, TypeScript, Express, REST

Cloud: AWS, EC2, Docker, CI/CD

Frontend: React, Angular, AngularJS

Data: MongoDB, Python, OpenCV

EDUCATION

B.Sc. Electrical (Telecommunication) Engineering

COMSATS Institute of Information Technology

CERTIFICATIONS

Cisco Certified Network Associate (CCNA)

PROFESSIONAL EXPERIENCE

Senior Software Engineer — Customer Services Transformation & Agentic Banking Systems

Emirates NBD (contract via Sphere IT)

Dubai, UAE | Sep 2023 – Present

Driving AI-led transformation of customer service for one of the largest banking groups in the Middle East.

- **Agentic banking workflows** — Architected an orchestration-based, multi-agent design enabling automated, guided customer-service fulfillment across digital channels.
- **Conversational AI** — Built natural-language banking experiences across WhatsApp and digital channels for direct, self-service request completion.
- **Secure backend services** — Developed scalable services for regulated banking operations, integrating core banking APIs with AI orchestration layers.

- **Workflow automation** — Led migration of manual processes toward AI-assisted execution, reducing handling time and operational load on service teams.

Technologies: Agentic AI, LangGraph, LLM Integration, TypeScript, Node.js, AWS, Banking APIs

Lead Software Engineer — AI Governance Platform

Paradigm Networks

Lahore, Pakistan | Sep 2021 – Sep 2023

Led engineering for an enterprise platform governing how organizations deploy and control AI.

- **Platform leadership** — Directed engineering of an enterprise AI governance platform to manage, govern, and audit AI model and agent usage at scale.
- **Policy & guardrails** — Designed policy enforcement, guardrails, and access-control capabilities governing how AI models and autonomous agents operate.
- **Compliance oversight** — Delivered governance workflows and oversight features giving compliance and risk teams auditability over enterprise AI activity.
- **Cloud-native delivery** — Architected secure, repeatable deployment on AWS, translating governance requirements into platform capabilities with stakeholders.

Technologies: AI Governance, Policy Engines, AWS, Node.js, TypeScript, Enterprise Controls

Senior Software Engineer — Product Modernization Lead

SkillMil Inc.

Remote | Aug 2022 – Jul 2023

Modernized a recruitment platform serving military veterans entering civilian careers.

- **Re-architecture** — Rebuilt platform architecture and technology stack to improve scalability, maintainability, and user experience.
- **CI/CD automation** — Implemented AWS-based pipelines, streamlining deployment and improving release reliability.

Senior Software Engineer

Mesmer

Lahore, Pakistan | Mar 2020 – Aug 2021

Built the backend powering a robotics-driven mobile UX testing platform for enterprise customers.

- **Backend architecture** — Designed systems supporting large-scale device farms and remote device automation.
- **AI-assisted vision** — Built OpenCV-based visual comparison and image processing to automate UX defect detection.
- **Platform delivery** — Delivered microservices and full-stack components with monitoring, observability (Datadog), and CI/CD pipelines.

Technologies: Python, OpenCV, Microservices, Device Automation, Datadog, CI/CD

EARLIER EXPERIENCE

Software Engineer, Mesmer (2016–2020) · Senior Software Engineer, Vrooz (2018–2019) · Software Development Engineer, eBricks (2014–2016) · SQA Engineer, GameView Studios (2013–2014) · Freelance Software Engineer, Upwork (2011–2013).

Spanning mobile testing automation and AI-assisted image processing, procurement SaaS modernization, MEAN-stack enterprise applications and microservices, mobile QA, and custom software delivery for international clients.