

Ammad Khan

Senior Full Stack & Agentic AI Engineer

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PROFESSIONAL SUMMARY

Senior Full Stack & **Agentic AI Engineer** with 10+ years of experience designing and delivering enterprise-grade software across Healthcare, Fleet Management, HR, Payroll, Logistics, Pharma, and SaaS domains. Deep expertise in **.NET / .NET Core, C#, Blazor, Angular, ReactJs, Next.js, Node.js and Python (FastAPI)**, with GraphQL, Entity Framework, SQL Server, PostgreSQL and Azure cloud-native architectures. Proven success leading global projects across Canada, Norway, the USA, and the UK, with measurable results in automation, API performance, enterprise SaaS delivery, and **production AI systems built on LangChain, LangGraph, LangSmith and Azure OpenAI**, including HL7 FHIR healthcare integrations.

30%

workload reduction through automation and scheduling

25%

performance improvement via optimized APIs and caching

15+

enterprise clients adopting ERP-scale SaaS platforms

AI

multi-agent LLM pipelines, chatbots, document automation, iPaaS

AREAS OF EXPERTISE

Languages & Frameworks	C#, .NET, .NET Core / .NET 10, Python, Node.js, Express.js, FastAPI
Frontend	Next.js, ReactJs, Angular, Blazor, TypeScript, Vite, Tailwind CSS
AI / ML	LangGraph, LangChain, LangSmith, Azure OpenAI, OpenAI API, Qdrant (vector search), RAG, multi-agent orchestration, Voice AI
Cloud & DevOps	Azure (App Service, Functions, Service Bus, Key Vault, Static Web Apps), AWS, Azure Auth / Entra ID, Azure DevOps CI/CD, Pulumi (IaC), Docker, Vercel
Databases	SQL Server, PostgreSQL, Supabase, MongoDB, Redis
Architecture	Modular Monolith, Microservices, Clean Architecture, CQRS, Domain-Driven Design, Event-Driven Design, RabbitMQ
APIs & Real-Time	GraphQL, REST, SignalR, NestJS, SIP / VoIP (Asterisk PBX, AudioSocket), Google APIs (Maps, Speech-to-Text), API Integration
Healthcare Interop	HL7 FHIR R4, SMART on FHIR, Epic / Cerner EHR integration

CAREER HIGHLIGHTS

- Vital Sense (MATERA)** – AI clinical decision-support platform for maternal health: multi-agent LangGraph pipeline, Epic FHIR integration, real-time clinician escalation.
- Mirlin Fleet Care** – Truck-fleet repair, tow-dispatch and inspection platform serving thousands of fleet units across Canada.
- iCall (WhatsApp-like Voice AI)** – Enterprise real-time Voice AI communication platform utilizing Asterisk PBX, AudioSocket, Qdrant vector search, and Pulumi IaC.
- FIFA World Cup AI Bot** – Chatbot built with LangChain.js and OpenAI delivering live match stats and insights.
- Web-to-PDF AI Agent** – Automated document conversion using Next.js, LangGraph.js, and MongoDB.
- iPaaS Suite** – Cloud integration platform connecting enterprise systems using Angular, .NET Core, Python and MongoDB.

PROFESSIONAL EXPERIENCE

Sr. Full Stack Developer

AIM (Canadian IT Firm) – Karachi, Pakistan

Apr 2025 – Present

Delivering flagship products for Canadian clients, currently Vital Sense (AI clinical decision support), following the successful delivery of Mirlin (fleet care).

Vital Sense (MATERA) — AI Clinical Decision-Support Platform (Canada) · Current

- Architected a **.NET 10 modular monolith** (8 bounded modules: Signal Intake, Agent Orchestration, Escalation, Care Navigator, FHIR/Epic, Auth, Health Data Services, API) with enforced architecture tests.

- Built a hybrid **.NET 10 + Python LangGraph multi-agent AI pipeline** (Azure OpenAI) running Risk Surveillance, Symptom Triage and Gestational Context agents in parallel, fused by a Clinical Supervisor against ACOG/ADA clinical guidelines.
- Engineered the agent orchestration with **LangGraph and LangChain**, modeling the parallel specialist agents and Clinical Supervisor as a stateful graph with structured tool calls and guardrails for grounded, auditable clinical outputs.
- Instrumented the pipeline end to end with **LangSmith** for prompt tracing, evaluation datasets and production monitoring, catching prompt regressions and validating agent accuracy against ACOG/ADA guidelines before release.
- Integrated **Epic EHR via SMART on FHIR R4** (OAuth2 + certificate auth) with bi-directional FHIR write-back; extended to Cerner, Accuro and TELUS PS Suite.
- Designed **event-driven** processing on Azure Service Bus with Redis-backed deduplication, caching and token storage; EF Core with per-module Azure SQL databases.
- Developed the **React + TypeScript clinician portal**, with real-time SignalR alerts, Entra ID (MSAL) SSO, live SLA countdowns, escalation workflows and clinical trend charts.
- Implemented clinician escalation via **Mattermost with Twilio SMS fallback**, and established Azure DevOps CI/CD (GitFlow, multi-stage YAML, secret scanning, branch policies as code).

Stack: .NET 10 · C# · Python (LangGraph) · Azure OpenAI · Azure SQL · Redis · Service Bus · Azure Functions · HL7 FHIR R4 · React · TypeScript · SignalR

Mirlin — Fleet Care Platform (Canada) · Delivered

- Delivered new features for a truck-fleet care platform serving **thousands of fleet units across Canada**, spanning fleet repair, tow-service dispatch, inspections, and fleet-care-provider registration.
- Partnered directly with stakeholders to translate requirements into scoped deliverables, align on release deadlines, and convert user feedback into iterative platform improvements.
- Designed features that **reduced client onboarding time by 20%**, increasing adoption across Canadian ERP clients.
- Led workflow optimization achieving **15% faster release cycles** and fewer production issues.

Stack: Blazor · .NET 8 · GraphQL APIs · Azure Auth

Freelance — Full Stack Engineer

Independent Contract – Remote

Jul 2025 – Dec 2025 · 6 months

iCall — Real-Time Voice AI Communication Platform

- Architected a real-time **Voice AI communications system** leveraging Asterisk PBX, SIP and VoIP protocols to enable low-latency, bidirectional voice conversations over internet telephony.
- Built a high-throughput **AudioSocket pipeline** streaming live, raw audio directly into a hybrid **Python (FastAPI)** and **Azure OpenAI** processing framework with sub-second response times.
- Integrated **Qdrant vector database** to execute contextual, **RAG-driven** knowledge retrieval mid-call, enabling the Voice AI agent to deliver accurate, context-aware responses in real time.
- Provisioned and automated cloud infrastructure deployment across **AWS/Azure** environments using **Pulumi (IaC)**, ensuring seamless dynamic scaling and high availability.

Stack: Asterisk · PBX · AudioSocket · SIP · VoIP · Voice AI · Qdrant · Pulumi · Python (FastAPI) · Azure OpenAI · Docker

Sr. Full Stack Developer

Contour Software (Vela-Ascertra – Norwegian Division) – Karachi, Pakistan

Apr 2022 – Apr 2025

- Delivered a workforce scheduling platform supporting **5,000+ employees across Norway**, automating scheduling and reporting with Angular, .NET Core, SQL Server and NGRX, reducing workload by **30%**.
- Built **Next.js** front-end modules and internal tooling, and developed **Python** services powering data-processing and reporting pipelines.
- Delivered AI-assisted features using **LangChain and LangGraph** for document processing and conversational workflows, with **LangSmith** for prompt tracing, evaluation and production monitoring.
- Coordinated with international teams to support European compliance and GDPR-aligned delivery.
- Introduced performance optimizations that increased system reliability by **25%**.

Stack: Angular · Next.js · .NET Core · Python · LangChain · LangGraph · LangSmith · SQL Server · NGRX

Sr. Full Stack Developer

Wiztech Pvt Ltd – Karachi, Pakistan

Aug 2020 – Mar 2022

- Developed logistics and iPaaS platforms using **ReactJs, Next.js, Node.js, .NET and SQL Server** for global clients.
- Built the NNR USA logistics platform handling **10,000+ shipments per month** with improved real-time tracking.
- Developed **Python (FastAPI)** microservices for integration and data-processing workloads, exposing REST APIs consumed by .NET and Node services.
- Used **Supabase (PostgreSQL)** for authentication and realtime data on client-facing modules, accelerating delivery timelines.

- Optimized APIs and caching, cutting response time by **25%**; strengthened data consistency and scalability, enabling multi-region deployments.

Stack: ReactJs · Next.js · Node.js · Python (FastAPI) · .NET · SQL Server · Supabase (PostgreSQL)

Software Engineer

Softronic Systems Pvt Ltd – Karachi, Pakistan Feb 2016 – Jul 2020

- Designed and deployed Payroll and HR (HCMS) systems for **15+ enterprise clients**, automating manual workflows.
- Built the Pharma Bridge Portal for regulatory compliance and marketing access in the pharma sector.
- Collaborated with business teams to reduce HR process time by **40%** through digitization.
- Mentored junior engineers, boosting team delivery efficiency by **20%**.

Jr. Software Engineer

Trandts – Karachi, Pakistan Jan 2015 – Jan 2016

- Developed the Trax Construction Management System for Australian clients, digitizing contracts and stock processes.
- Automated document workflows, improving efficiency by **20%**; enhanced UI/UX for smoother stakeholder adoption.
- Assisted senior developers with code refactoring and testing, reducing bug rates by **15%**.

EDUCATION

Bachelor of Computer Science | Shah Abdul Latif University – Karachi · Feb 2019 – Nov 2023

CERTIFICATIONS

Silver Level — Cyber Resilience: Advanced	Phished	Issued Jul 2024 · Valid to Jul 2026
HIPAA Associate (HIPAAA)	KnowBe4	Issued Nov 2023 · initially certified Apr 2022
Kevin Mitnick Security Awareness Training	KnowBe4	2024

TECHNICAL PROFICIENCIES

C# | .NET | .NET Core | .NET 10 | Python | FastAPI | Node.js | Express.js | Next.js | ReactJs | Angular | Blazor | TypeScript | NestJs | LangGraph | LangChain | LangSmith | Azure OpenAI | OpenAI API | Qdrant | RAG | Voice AI | Asterisk PBX | SIP | VoIP | AudioSocket | Azure | AWS | Azure Functions | Azure Service Bus | Azure Key Vault | Entra ID | Azure DevOps | Pulumi | Docker | Vercel | SQL Server | PostgreSQL | Supabase | MongoDB | Redis | GraphQL | REST API | SignalR | RabbitMQ | Entity Framework | Sequelize | TypeORM | Microservices | Modular Monolith | CQRS | Clean Architecture | Event-Driven Architecture | HL7 FHIR | SMART on FHIR | API Integration

LANGUAGES

English — Professional · Urdu — Native · Arabic — Beginner