Yousuf Mohammad

Forward-Deployed AI Leader · Healthcare GenAI & Agentic AI

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SUMMARY

Forward-Deployed AI Leader with 20+ years in enterprise technology, taking healthcare GenAI and agentic AI from idea to production at UnitedHealth Group. Embeds with business teams and owns the whole path: strategy, product, architecture, hands-on engineering and delivery. Track record of turning AI into measurable results in regulated industries at UnitedHealth Group, Fannie Mae and AWS. AWS Golden Jacket, CNCF Kubestronaut and Claude Production AI Specialist; doctoral student in Health Informatics at UTHealth Houston.

- **3 weeks from idea to MVP** for a Medicare Part D GenAI solution at UnitedHealth Group, now being taken to production.
- **2× regulated cloud adoption** (25% to 50%) with CLARA, a multi-agent AI system designed and built for architecture governance.
- **$3M saved per year** with LLM-powered document intelligence at Fannie Mae, with 60% faster retrieval.
- **$67M+ annual cloud spend** made AI-ready across 160+ healthcare migrations at UnitedHealth Group.
- **$40M ARR (65% YoY)** driven at AWS by aligning Fortune 500 C-suites on cloud strategy.

Core expertise: Forward-Deployed AI · Generative & Agentic AI · RAG · LLM Evaluation & Guardrails · Healthcare & Regulated Industries · AWS & Azure · Kubernetes · Enterprise Architecture

EXPERIENCE

UnitedHealth Group

Minnetonka, MN · Sep 2025 – Present

Forward Deployed AI Lead — Jul 2026 – Present

- Led the team that took a Medicare Part D GenAI solution, identifying the highest-impact drugs for the bidding process, from idea to MVP in 3 weeks; now driving it to production.
- Embedded with business teams, owning strategy, product, architecture, hands-on engineering and delivery end to end.
- Claude Code Ambassador Program: certified Claude Production AI Specialist; helped 20+ colleagues put AI to work.

Principal Architect, Medicare & Retirement — Sep 2025 – Jul 2026

- Pioneered CLARA, a multi-agent AI system that automates architecture reviews and risk scoring, helping double regulated cloud adoption from 25% to 50%.
- Led the transformation of legacy healthcare platforms into AI-ready, cloud-native architectures: $67M+ annual spend, 160+ migrations.
- Set technical direction for 11+ architects and 80+ engineers across multiple vendors; standardized Cloud & GenAI accelerators and enterprise Kubernetes platforms.

GenAI · Agentic AI · Azure · AWS · Kubernetes · HIPAA-Aligned Architecture

Fannie Mae

Reston, VA · Aug 2023 – Jul 2025

Principal, Enterprise Architecture & Technology (Director Level)

- Brought GenAI into document management: re-architected it as a plugin-based platform with metadata tagging, search and OpenAI-powered summarization, saving $3M per year with 60% faster retrieval.
- Designed a domain-driven, API-first microservices architecture for the lending platform, reducing processing fees by 0.3%.

- Replaced manual, PDF-based lender risk assessments with an event-driven, configuration-driven React forms engine that achieved 99% approval ratings.
- Built a self-service analytics platform on Redshift APIs with Lambda-based pipelines, cutting development cycles by 40%.

OpenAI API · AWS Lambda · Redshift · Athena · S3 Tables · React · DDD · Event-Driven Architecture

Amazon Web Services

Houston, TX · Apr 2021 – May 2023

Solutions Architect

- Drove $40M ARR (65% YoY) across North America, the UK and Germany, aligning Fortune 500 C-suites on cloud strategy through executive briefings.
- Delivered 30% cost savings and faster disaster recovery through Well-Architected Framework reviews.
- Built a global enterprise Kubernetes framework that sped up deployment cycles by 30%, and a React micro-apps framework that cut duplicate development by 40%.
- Inducted into the AWS Technical Field Community; trained 300+ engineers through workshops and game days.

AWS · Kubernetes · Well-Architected · Micro Frontends · FinOps

Additional Experience

2002 – 2023

Principal Cloud Architect at Kessel Run (US Air Force); Solutions Architect at Corteva Agriscience; Software Engineer to Technical Architect at Schlumberger, Shell, JPMorgan Chase, Wells Fargo and others, building secure, polyglot systems (Java, C#, Python, JavaScript) for regulated industries.

EDUCATION

Doctor of Health Informatics, UTHealth Houston, McWilliams School of Biomedical Informatics — In progress

Master of Science, Computer Science, University of Houston–Clear Lake

Bachelor of Science, Computer Science, Osmania University

CERTIFICATIONS

AI: Claude Production AI Specialist; AWS Certified AI Business Strategist; AWS Certified AI Practitioner; UnitedHealth Group AI Dojo Generative AI

AWS Golden Jacket: Solutions Architect Professional, DevOps Engineer Professional, Solutions Architect Associate, Data Engineer Associate, Developer Associate, CloudOps Associate, Cloud Practitioner; plus the 2 AWS AI certifications above

CNCF Kubestronaut: CKA, CKAD, CKS, KCNA, KCSA

Microsoft Azure: Solutions Architect Expert, DevOps Engineer Expert, Administrator Associate, Fundamentals

Architecture & Delivery: TOGAF® 9 Certified; Project Management Professional (PMP)

AI RESEARCH, ARTICLES & RECOGNITION

Doctoral research, NephroIQ: a platform for AI agents that support nephrologists. Its first agent, Filtra, prepares a one-page, evidence-backed summary before each chronic kidney disease visit, built on KDIGO guidelines, with every decision left to the clinician.

Articles (Medium): FDE Junkies: Addicted to the Last Mile; From Static PDFs to Dynamic Web Apps (multi-agent AI turning 70+ medical PDF forms into web forms in minutes); Healthcare Document Intelligence; From Code to Connection.

Recognition: 6× BEAT Award (Fannie Mae); Solutions Architect of the Quarter (AWS); CIO Award, Team Contribution; Speaker, AWS Energy Conference, London; Microsoft TEALS volunteer.