

Daniyal Hassan

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Professional Summary

Technical Leader, Software Architect, and AI Engineer with 6+ years architecting and scaling high-performance distributed systems. Proven track record building, leading, and scaling engineering teams and delivering mission-critical fintech infrastructure and fault-tolerant payment systems — paired with deep, hands-on expertise shipping production AI products end-to-end (agentic pipelines, RAG, memory, and real-time voice systems). Gold Medalist in Computer Science with expertise spanning full-stack development, cloud infrastructure, applied LLM engineering, and system design for multi-tenant enterprise applications.

Professional Experience

MindMax

Aug 2025 - Present

Principal Software Engineer

Dubai, UAE

- Owned multiple AI learning products end-to-end — from inception and rapid prototyping through production deployment and data-driven iteration
- Architected agentic pipelines with LangGraph, orchestrating stateful, multi-step reasoning, tool calling, and real-time user interruption handling for steerable, autonomous learning agents
- Built RAG systems pairing embedding-based semantic retrieval with LLM-driven re-ranking to feed high-relevance, grounded context into the main agent
- Designed persistent AI memory systems (episodic and semantic) enabling personalized, context-aware experiences that adapt to learners across sessions
- Engineered low-latency real-time voice pipelines on LiveKit (WebRTC) with streaming STT/TTS for natural conversational tutoring
- Integrated multiple AI gateways and frontier model providers with intelligent routing, fallbacks, and cost/latency optimization, and instrumented the stack with tracing, evals, and analytics (LangSmith/Langfuse, OpenTelemetry)
- Owned cloud infrastructure end-to-end — codified CI/CD and provisioning as Terraform (IaC), and optimized architecture and resource usage to cut infrastructure costs ~4x and accelerate deployments ~2x
- **Tech Stack:** NodeJS, TypeScript, Python, NextJS, PostgreSQL, LangGraph, LiveKit, AWS, Terraform

CreditBook

May 2023 - Aug 2025

Staff Software Engineer & Technical Lead

Dubai, UAE

- Architected a multi-tenant, multi-geo core banking/lending platform (Credr) with fault tolerance and scalability, serving ~1M users across multiple markets
- Designed infrastructure using containerization (EKS/Kubernetes), optimizing for scale and cost-efficiency with automated CI/CD pipelines
- Pioneered integration of AI tools into development workflow, improving efficiency in development, code reviews, and documentation processes
- Engineered domain models and microservices with clear separation of concerns based on DDD principles, ensuring future-proofing and localization extensibility
- Developed interfaces for integration with third-party services including payment gateways, virtual account providers, and KYC services
- Led system design, architecture decisions, and engineering processes while mentoring 4-6 engineers
- **Tech Stack:** NodeJS, React, TypeScript, PostgreSQL, MongoDB, Redis, AWS, Docker, Kubernetes

CreditBook

Jul 2022 - May 2023

Senior Software Engineer & Technical Lead

Remote

- Spearheaded technical strategy while balancing hands-on development and leadership, bridging engineering, product, and business to drive cross-functional alignment
- Drove engineering excellence through implementation of best practices, code reviews & ownership, and architectural guidance
- Mentored engineering team, conducted performance evaluations, and created growth paths for team advancement
- **Tech Stack:** NodeJS, React, TypeScript, MongoDB, Redis, AWS, Docker, Kubernetes

CreditBook

Dec 2021 - Jul 2022

Senior Software Engineer

Remote

- Built and shipped financial features including billbook, cashbook, and lending systems while contributing to schema/architectural decisions

- Developed the payment processing pipeline powering the CreditBook wallet with integrations to multiple banking networks
- Engineered Embedded Wallet with features for send/request money, B2B transfers, and real-time balance updates
- Implemented idempotency controls, transaction consistency, and fault tolerance across asynchronous workflows
- **Tech Stack:** React, React Native, NodeJS, MongoDB, AWS

Educative, Inc.

Aug 2021 - Oct 2021

Software Engineer

Lahore, Pakistan

- Developed microservices for the code execution environment using Test-Driven Development methodology
- Enhanced platform functionality by contributing to both frontend and backend development
- **Tech Stack:** Python, React, NodeJS, TypeScript, Docker

Previously worked part-time / on contract at **Elixir Technologies**, **CARE** (Center for Advanced Research in Engineering), and **Hoo Controls**

Education

FAST – National University of Computer and Emerging Sciences

Apr 2017 - Jun 2021

BS in Computer Science, CGPA: 3.90/4.0 (Gold Medalist)

Islamabad, Pakistan

- Graduated Summa Cum Laude
- Member of Dean's List and Rector's List

Beaconhouse School System (BMI)

Apr 2015 - Apr 2017

A-Level in Physics & Computer Science, CGPA: 4.00/4.00 (Gold Medalist)

Islamabad, Pakistan

Technical Skills

AI & ML Engineering: LLM & Agentic Systems, LangGraph, RAG, AI Memory, Real-time Voice (LiveKit), Embeddings & Vector DBs (pgvector), Evals & Tracing (LangSmith/Langfuse)

Languages: TypeScript/JavaScript (Node), Go, Rust, Python, C++

Frontend & Mobile: React / Next, React Native, Svelte

Backend & APIs: Express, Nest, Fastify, Chi (Go), RESTful APIs, GraphQL, WebSockets, JWT

Databases & Storage: PostgreSQL, MongoDB, Redis, MySQL, DynamoDB, Cloud DataStore

Cloud & Infrastructure: AWS (ECS, EKS, EC2, S3, Lambda, RDS, CloudWatch, Route53, VPC, SNS, SQS), GCP

DevOps & Tools: Docker, Kubernetes, Terraform (IaC), GitHub Actions, Bash Scripting

System Architecture: Microservices, Distributed Systems, Event-Driven Architecture, Domain-Driven Design

Leadership & Management: Technical Strategy & People Management, Mentorship, Technical Recruitment

Project Management: Agile Methodologies, Quarterly & Sprint Planning, Backlog & Technical Debt Management, Project Breakdown & Estimations

Honors & Awards

- Gold Medal for BS Computer Science (FAST-NUCES) - Graduated Summa Cum Laude
- Gold Medal for A-Level Studies (Beaconhouse School System) - Perfect 4.00 GPA
- Consistent Member of Dean's List and Rector's List throughout university