MD ELIAS HOSSAIN

SOFTWARE ARCHITECT & AI EXPERT | FULL-STACK DEV & ENG | RAG, AI AGENTS

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PROFILE

Dedicated, results-driven Software Architect and AI Expert with 9+ years of full-stack experience. Proven expertise in building production-grade RAG systems, LLM agent workflows, multi-tenant SaaS platforms, and scalable backends. Recognized as a Top Rated Freelancer on Upwork (Top 10%).

CORE EXPERTISE

AI and LLM Engineering

RAG pipeline design and optimization, LLM integrations (OpenAI, Claude, Gemini), AI agent workflows, multi-agent orchestration, semantic search, vector databases, prompt engineering, token cost optimization, and production AI debugging.

Software Architecture

Multi-tenant SaaS platforms, RBAC and permission systems, event-driven backends, modular monolith and microservice design, API-first architecture, codebase audits, and technical rescue work.

Backend Engineering

NodeJs, NestJS, Express, TypeScript, REST APIs, WebSockets, JWT Auth, Queue systems, Serverless functions.

Frontend Engineering

NextJs, React, TypeScript, Tailwind CSS, Material UI, Server Components, App Router.

Databases and Storage

MongoDB, PostgreSQL, Redis, Supabase, Firebase, Prisma, Mongoose, Vector databases (Pinecone, pgvector, Qdrant).

Cloud and DevOps

AWS Lambda, Docker, CI/CD pipelines, Serverless architecture, Environment management and production deployment.

EDUCATION

National University, Bangladesh

BBA in Finance & Banking - March 2022 (Class of 2018) Completed Four Years Bachelor's Course

LANGUAGES

- English (Professional)
- Bengali (Native)
- Hindi/Urdu (Conversational)

PROFESSIONAL EXPERIENCE

Independent Consultant & Architect

Recent Highlights

Relevant Experience

- AI-powered SaaS platforms with LLM features, semantic search, and document processing pipelines built for production workloads.
- RAG systems with retrieval tuning, chunking strategy, embedding pipelines, and accuracy optimization across real datasets.
- Multi-agent orchestration workflows using Claude and OpenAI APIs with structured output, fallback handling, and observability.
- Multi-tenant SaaS backends with role-based access control, scoped data isolation, and subscription-aware APIs.
- Real-time applications using SocketIo and WebSockets for live collaboration, notifications, and event-driven features.

Upwork (Top Rated Freelancer)

April 2024 - Present

Full-Stack Developer

- Successfully completed multiple contracts on Upwork and delivered over 50+ development tasks/ projects for clients
- Achieved Top 10% of talent status with multiple 5-star ratings
- Proven ability to meet client expectations by delivering high-quality solutions on time and ensuring full client satisfaction

ElegantMind Ai

Dallas, TX (Remote)

Full-Stack Engineer

- Developed multi-tenant hospital management applications and communication software with seamless integrations for platforms like Slack, WhatsApp, and other workspaces.
- Built applications that generate and adapt voice outputs based on DISC personality profiles (Dominance, Influence, Steadiness, Conscientiousness).

Arthalab Solutions (STPI Aurangabad, Maharashtra, India)

Sept. 2024 - Present

Full-Stack Developer & DevOps (Remote)

- Engineered full-stack solutions using modern frameworks (React.js, Next.js, Node.js, Express.js, Nest.js), reducing development cycles by 30%
- Designed and maintained CI/CD pipelines with GitHub Actions, automating testing, builds, and deployments to accelerate release velocity by 40%
- Managed version control, testing, and debugging, utilizing GitHub, Jest, and Cypress to ensure smooth deployment and high-quality code
- Collaborated with product and QA teams to streamline Agile workflows, delivering high-impact features aligned with business objectives in 2-week sprints

Stack Learner (Bashundhara R/A, Dhaka)

Feb 2018 - December 2023

Full-Stack Developer & Front-End Team Lead

- Led a front-end development team to deliver seamless web applications, ensuring optimal user experiences using React.js, Next.js, and Tailwind CSS
- Developed back-end solutions using Node.js, Express.js
- Managed version control, testing, and debugging, utilizing GitHub, Jest, and Cypress to ensure smooth deployment and high-quality code

FEATURED SYSTEMS & ARCHITECTURES

Political Fundraising CRM (RaiseMore) — *NextJS, Node, Postgres, WebSockets*
- Syncs ActBlue webhooks in sub-seconds and runs collaborative dialers serving 200+ campaigns.

Intent-Driven AI Project Agent — *TypeScript, Claude/OpenAI APIs, pgvector*
- Intelligent command router converting natural language queries into finite, typed JSON actions.

Production-Grade RBAC Monorepo Library — *TypeScript, NestJS, React, Turborepo*
- TS monorepo library with recursive DAG traversal role inheritance checks and React admin panels.