

Tafsir Chowdhury

Full Stack AI Engineer

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SUMMARY

Backend-first Full Stack AI Engineer with system design depth, AI pipeline ownership, and DevOps working knowledge. 3+ years building production-grade web applications with TypeScript, Node.js, Next.js, and cloud infrastructure (AWS EC2/ECS, Railway). Proven track record architecting multi-LLM pipelines (OpenAI, Claude, Gemini), distributed worker systems, and scalable REST APIs for global clients.

TECHNICAL SKILLS

Languages: JavaScript (ES6+), TypeScript, SQL

Frontend: React.js, Next.js, Tanstack Query, Zustand, Tailwind CSS, ShadCN UI

Backend: Node.js, Express.js, Drizzle, Prisma ORM, Mongoose, Redis, BullMQ, Better Auth, Clerk

AI: Retrieval-Augmented Generation, AI Agents, Tool Calling, Vercel AI SDK, OpenAI API, Claude API, Gemini API

Databases: PostgreSQL, MongoDB, MySQL

DevOps & Cloud: Docker, AWS (EC2, ECS), Vercel, Railway, GitHub Actions, CI/CD Pipelines

PROFESSIONAL EXPERIENCE

Standard Insights

Oct '24 – Present

Full Stack AI Engineer

Remote | New York, USA

- Architected and shipped a multi-phase, multi-LLM AI report generation pipeline powering market trend analysis, consumer persona synthesis, and strategic insights. Built as 32 durable Inngest functions with automatic retries, concurrency control, and failure callbacks, replacing one-shot API calls with durable background jobs.
- Designed and owned a distributed background worker microservice processing AI workloads across 10+ concurrent queue types (quantitative data analysis, interview translation, persona generation, B2B scraping, Google Sheets sync), including a 6-step idempotent Excel/CSV ingestion pipeline with Gemini schema analysis and S3 I/O; implemented batching and per-survey concurrency locks to prevent race conditions at scale.
- Built an AI-powered Survey Builder Agent with multiple tools and 7-intent discriminated-union Zod schema validation against Gemini structured output, enabling natural-language survey management and real-time LLM-to-state mutation with zero schema-drift between the API and database layer.
- Built and optimized REST APIs in Express.js with MongoDB and Redis caching; implemented JWT auth, role-based access control, and Google OAuth2 token refresh for Google Sheets and Slack integrations.
- Containerized 3 production services (client, server, admin) with Docker, integrated CI/CD pipelines via GitHub Actions and deployed on AWS ECS, Railway for cost-optimized serverless execution at scale.

HJ Animation Shop LTD

Jul '23 – Sep '24

Full-Stack Developer

Remote | Loughton, United Kingdom

- Built autonomous AI customer support platform (Aximus) using Next.js and Vercel AI SDK. Engineered a ToolLoopAgent with dynamic tool-calling and a keyword-scoring RAG engine (no embedding API; 98% accuracy), with HMAC-SHA256 Meta webhook ingestion and atomic DB idempotency locks.
- Architected multi-tenant SaaS platforms in Next.js 16 and Drizzle ORM, including a floating-point-free commission math engine, custom binary JPEG/PNG metadata parser for AI portrait editing, randomized exam engine with practical video submission grading, and a headless CMS (Parocia) with RSC, dynamic sitemap/JSON-LD, and UUID-hashed file storage.
- Integrated Better Auth with RBAC, 6-digit OTP 2FA, and session revocation across products; wired SumUp and UddoktaPay v2 payment flows, and serverless jsPDF routes with font-scaling for dynamic certificate generation.

PROJECTS

Visual Source | *Real-time soccer match operations and social graphic automation*

Live | 2026

- Architected a multi-tenant soccer club dashboard using Next.js 16, Turborepo, and Better-Auth, securing isolated workspaces for multiple sports organizations.
- Engineered a headless canvas rendering pipeline with Fabric.js, node-canvas, and Sharp to compile dynamic matchday graphics stored in Cloudflare R2.
- Integrated Facebook, Instagram, and Twitter Graph APIs, executing a polling and media chunking pipeline for real-time automated matchday posting.
- Designed a resilient Sportmonks API data synchronizer using PostgreSQL advisory locks to prevent database write collisions during concurrent syncing.
- Developed a live event logging UI with game-state tracking, automatic score override mechanisms, and a cron-scheduled graphic publishing queue.
- Deployed a containerized production stack using Docker Compose, orchestrating PostgreSQL, Next.js, and Caddy to automate SSL/HTTPS certificates and reverse proxying.

Everything Green | *Digital Sustainability & SEO Platform*

Live | 2025

- Designed a Retrieval-Augmented Generation (RAG) chatbot on NestJS using MongoDB and OpenAI embeddings, featuring dynamic HTML scraping, semantic chunking, and context-aware query optimization to deliver digital sustainability advice.
- Developed an AI SEO recommendation engine that matches Google Ads suggestions to scraped website pages via cosine similarity, classifying conversion performance using a custom-trained CatBoost model.
- Implemented a secure subscription billing system using the Factory Pattern to integrate Stripe and PayPal, supporting customer portals, dynamic coupons, and webhook validation.
- Built a responsive Next.js 15 dashboard with interactive D3/Sankey data visualizations for sustainability metrics.

Career Dock | *A Modern Job tracking application*

Live | 2024

- Built an end-to-end Next.js and Express.js application with Clerk authentication, Lemon Squeezy subscription billing, and automated CI/CD deployments to Vercel.
- Integrated the Gemini API to construct prompt-chaining workflows that generate tailored resumes, LinkedIn profiles, and cover letters based on target job descriptions.

EDUCATION

University of the People

2021 – 2024

Bachelor of Science in Computer Science

DEAC | California, USA

- Graduated with CGPA 3.67

CERTIFICATIONS

IBM: Full Stack Software Developer Specialization

Meta: Front-End Developer Specialization | Back-End Developer Specialization

Amazon Web Services: AWS Fundamentals Specialization

LANGUAGES

English: Fluent

Bengali: Native