

Md Shihab Hossain

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EDUCATION

North South University

B.Sc. in Computer Science and Engineering

2022 – 2027

Dhaka, Bangladesh

Relevant Coursework: Data Structures & Algorithms, Operating Systems, Database Systems, Software Engineering, Machine Learning, Neural Networks

PROJECTS

DevChat [[GitHub](#)] — Next.js 15, TypeScript, Supabase (Postgres, Realtime, Auth), OpenAI API, Tailwind CSS, Vercel

- Built a real-time developer chat platform with live messaging, typing indicators, and presence on Supabase Realtime, using optimistic sends and reconnect backfill so no message is lost.
- Designed database-level authorization with Postgres row-level security and SECURITY DEFINER RPCs, verified by a 37-case SQL test suite of allowed and forbidden actions.
- Integrated streamed AI code explanations (OpenAI over SSE) with per-message caching, AES-256-GCM encrypted API keys, and per-user rate limiting; shipped with GitHub Actions CI and CodeQL.

Cogniflow AI [[GitHub](#)] — Next.js 15, TypeScript, Google Gemini API, RAG, Hybrid Search, IndexedDB, Vercel

- Engineered a browser-based multimodal RAG engine that answers questions over YouTube videos, podcasts, PDFs, and audio, with citations that deep-link to the exact video timestamp.
- Built hybrid retrieval (vector similarity + BM25, merged with reciprocal rank fusion) over paragraph-aware chunks and task-typed Gemini embeddings, rewriting follow-up questions into standalone queries.
- Designed a local-first, privacy-preserving architecture: embeddings stored in IndexedDB, only top-k excerpts sent to the model, prompt-injection-safe grounding, streamed answers, and per-IP rate limits.

TECHNICAL SKILLS

Languages:	TypeScript, JavaScript, Python, C++, Java, Swift
Frontend:	React.js, Next.js, HTML, CSS, Tailwind CSS, React Native
Backend & APIs:	Node.js, Express.js, GraphQL, REST APIs, Socket.io, WebSockets
Databases:	PostgreSQL, MongoDB, Vector DBs, Supabase, Redis
AI & Cloud:	OpenAI & Gemini APIs, Claude Code, MCP, AI Agents, RAG, LLM Evals, Prompt Engineering, Vercel, AWS, Git
GTM & Automation:	Clay, Apollo, HubSpot, n8n, Zapier, Make, Instantly, Smartlead, Firecrawl, Web Scraping, Lead Enrichment, Signal-Based Prospecting, Cold Outbound Sequences, CRM Automation

WORK EXPERIENCE

Springer Capital

Backend Software Engineer Intern

June 2026 – Present

Remote | Chicago, US

- Architected and deployed high-throughput Node.js/Python microservices and RESTful APIs for real estate asset valuation and cash flow modeling, reducing underwriting query latency.
- Optimized relational database schemas (PostgreSQL) and implemented asynchronous task processing pipelines with Redis queues, ensuring high uptime across multi-region financial data feeds.

Reputaionaire

GTM & Product Consultant

February 2026 – May 2026

Remote | Melbourne, Australia

- Designed a zero-cost 90-day GTM strategy targeting UK and Australian tech recruitment agencies, creating 4-touch cold outreach sequences and developer sourcing workflows.
- Conducted product/UX audits on TechieRank, recommending a business model pivot from \$3 AUD micro-credits to a \$149/mo B2B SaaS subscription model, while building automated lead generation pipelines.

NSU HCI-DIAL (Human-Computer Interaction Lab)

Research Assistant (Supervised by Dr. Nova Ahmed)

December 2025 – Present

Dhaka, Bangladesh

- Conducted qualitative B2B user research, structured interviews, and thematic analyses, successfully translating diverse user challenges into clear accessibility requirements for engineering teams.
- Collaborated closely with cross-functional design and software engineering teams to rapidly prototype inclusive UI features, co-authoring research manuscripts aimed at ACM CHI and UbiComp.

Outlier AI

AI Data Trainer (Coding & Reasoning)

March 2024 – December 2024

Remote | San Francisco, US

- Evaluated and refined LLM code generation (TypeScript/Python) and logical reasoning outputs, delivering detailed analytical feedback on correctness and quality.
- Designed detailed model evaluation guidelines and simulated LLM-as-a-Judge frameworks to systematically audit response correctness, code security safety, and system self-optimization.

LEADERSHIP & VOLUNTEERING

NSU Social Services Club (NSUSSC)

Sub-Executive Body Member

September 2022 – December 2025

Dhaka, Bangladesh

- Spearheaded volunteer operations and nationwide campaigns for "Socio-Camp" (120+ student teams across Bangladesh) and directed logistics for relief campaigns reaching 1,000+ underprivileged families.

NSU Ethics and Diversity Club (NSUEDC)

Senior Member

May 2023 – December 2025

Dhaka, Bangladesh

- Co-led planning, logistics, and PR for the "Governance Challenge" policy case competition (50+ inter-university teams) and organized the Spring Orientation for 300+ incoming recruits.

CERTIFICATIONS

IBM Data Science Professional Certificate — IBM (January 2025)

Google Cybersecurity Professional Certificate — Google (February 2025)

The Complete Web Development Bootcamp — Udemy (December 2024)