S Rafiul Hasan

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EXPERIENCE

R&D Engineer (Remote)   May 2025 – August 2025
BrainHouse   *County Dublin, Ireland*
- Researched and evaluated cutting-edge AI technologies including LangChain.js and LLM fine-tuning methodologies (QLoRA) and tools like Unsloth to inform product development strategy
- Engineered AI-powered Human Like Talking Gesture using React, Node.js, and MongoDB

Full Stack Developer   January 2025 – March 2025
Freelance Project   *Dhaka, Bangladesh*
- Architected and deployed a production-ready CRM platform for a dental practice, converting complex operational workflows into a scalable system architecture and improving process efficiency by 35%.
- Built full-stack features using Next.js and MongoDB, implementing role-based access control, end-to-end patient lifecycle management, and responsive analytics dashboards, increasing operational visibility and data accessibility by 40%.

TECHNICAL SKILLS

Languages: Go, Javascript, Typescript, SQL
Frameworks & Libraries: Node.js, NextJS, Chi, Gin, React, React Native, NestJS, Shadcn
Cloud Services: AWS (Lambda, ECS, S3, CloudFront, API Gateway), Vercel
Developer Tools: Git, Docker, Linux, Neovim
Database & Queues: PostgreSQL, SQlite, MongoDB, Redis , RabbitMQ

PROJECTS

Jigao Backend *Golang, Node.js, TypeScript, PostgreSQL, Docker, gRPC*
- Developed an AI-powered exam platform generating MCQ, True/False, Fill-in-the-blank, and short-answer questions from study materials with adjustable difficulty and auto-explanations.
- Designed a microservices architecture using Go (REST, WebSockets, PostgreSQL) and Node.js (gRPC AI processing) to enable scalable real-time exam sessions.
- Implemented live exam rooms with timers, automatic grading, instant scoring, and multi-user participation via WebSockets.
- Integrated LangChain.js with Groq LLM for structured AI question generation; secured with Clerk (JWT) and deployed using Docker on AWS EC2.

Jigao Web App | *React, Typescript*
- Frontend for question generation, question set building and managing. Also Exam Environment plugging with backend socket api.
- Deployed using AWS Cloudfront and S3.

cholochitro *NextJS, Typescript*
- Developed an Movie Seat Booking Application that can handle traffic in peak.
- Engineered a CI/CD pipeline integrating Jest and Supertest for automated integration testing across authentication, authorization, and CRUD workflows, achieving 85%+ code coverage and reducing debugging time by 60% through structured error handling and continuous validation.
- Architected JWT-based authentication with role-based access control (RBAC), securing 100% of booking endpoints with middleware-enforced authorization layers protecting admin routes from unauthorized access
- Designed 5-layer clean architecture (Routes → Controllers → Services → Repositories → Database) achieving 97.6% TypeScript coverage, enabling 40% faster feature development through modular, testable components

EDUCATION

United International University   United City, Dhaka-1212
Bachelor of Science in Computer Science & Engineering   *Jan. 2023 – Present*
Current CGPA 3.74 (10/12) Final Year