

Asiful Haque Mridul

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SKILLS

- **Backend:** Node, Express, SQL, Drizzle, Prisma, GraphQL, WebSocket, PostgreSQL, MySQL, MongoDB
- **Frontend:** React, Next, Storybook, React Query, Apollo, Zustand, Redux, Tailwind CSS, Sass, Shadcn
- **Devops & Other:** Docker, Kubernetes, Helm, NGINX, CI/CD, AWS, VPS, Linux, Git, RabbitMQ, Agile, Scrum
- **AI Engineering:** Langchain, Embeddings, Retrievers, ChromaDB, Pinecone, OpenAI, Spec-driven development
- **Algorithm:** Solved **500+** problems on [leetcode](#)

WORK EXPERIENCE

Itsian — Fullstack Developer

Dec 2024 — Present | Dhaka, BD

- Designed a NestJS **digital wallet** using PostgreSQL and Drizzle ORM, ensuring strict **ACID** consistency for **ARS bank transfers** and eliminating duplicate outlays by **100%** via a rigid **double-entry ledger** guard.
- Engineered a secure onboarding ecosystem using Cloudinary **webhooks** and **biometric liveness** checks, reducing **identity fraud** by **45%** by automating asynchronous database updates via **RabbitMQ** event streams.
- Developed a **real-time** tracking pipeline with NestJS and Redis to stream **telemetry**, blocking **99%** of **bot farm exploits** by executing **30-second** view authenticity checks and **anti-abuse escrow** restrictions.
- Built a decoupled **telemetry** ingest router utilizing Express, Mongoose, and MongoDB, **scaling** throughput by **300%** by offloading high-volume **heartbeat payloads** instantly to background **RabbitMQ** workers.

Lemon Hive — Fullstack Developer

Sep 2022 — July 2024 | Dhaka, BD

- Optimized a highly relational **product catalog API**, reducing query latency from **5s** to **0.36s** by implementing data **snapshotting** to eliminate heavy **table joins** and deploying **Redis** for real-time cache updates.
- Refactored the **chat feature** from manual polling to **WebSocket-based state synchronization**, eliminating server **bottlenecks** and ensuring instant message delivery for up to **20k** concurrent users.
- Automated **CI/CD** pipelines via **GitHub Actions** to deploy **Dockerized** applications across **Hostinger VPS** environments, accelerating deployment frequency while maintaining **99.9%** production uptime.
- Shipped **6** Next.js apps tested with **Jest** and **Storybook**, while architecting a custom **Strapi headless Page Builder** and an optimized **CKEditor plugin** that streamlined frontend rendering using dynamic schemas and Markdown.

PROJECTS

CollabGrid | [Video](#) | [Live](#) | [Code](#) | — A SaaS platform and collaborative workspace for B2B event organization, combining real-time visual canvas management with high-throughput transactional inventory booking.

- Architected a **two-tier write-behind cache** utilizing **Redis** and **RabbitMQ** to throttle **60 fps WebSocket** write storms, reducing PostgreSQL database connection saturation by **98%** via **400ms debounced** persistence pipelines.
- Eliminated e-commerce inventory **race conditions** and **double-payments** by implementing atomic **Redis distributed locks** and unique database constraints, ensuring **100%** transactional order integrity.
- Mitigated automated inventory sniping by developing a high-performance **bot-detection guard** in Redis, **throttling** rapid socket events under **120ms** to completely block malicious **mouse-teleportation abuse**.
- Optimized **network egress** and server **bandwidth** by designing a **spatial zone sharding architecture** that partitioned a **10k canvas** into a **10x10 grid**, cutting wasteful WebSocket broadcast **fan-out** by over **85%**.

KajBazar | [Live](#) | [Code](#) | — A scalable freelance marketplace using microservices architecture, real-time communication, and polyglot persistence across 10 services.

- Designed a **microservices** architecture with a **gateway service** that translates incoming **HTTP traffic** into low-latency internal **gRPC** calls, using **Turborepo** and **polyglot DB transactions** for concurrency control.
- Architected scalable **real-time chat & notification** systems. Utilized **WebSockets** for instant communication, **Redis Pub/Sub** for decoupled messaging, & **Redis Cache** for fast data retrieval & **high-traffic** performance.
- Engineered gateway **token rotation** via auth service **gRPC** calls, enforcing a **3-layer zero-trust** model where downstream services use **gRPC interceptors and metadata** to verify both gateway origins and bearer tokens.
- Streamlined **microservice deployment** using **multi-stage Docker builds** and **Helm charts** on **Kubernetes**, with **Ingress-NGINX** and **Cert-Manager** for automated **TLS**, managed via **GitHub Actions CI/CD pipelines**.

EDUCATION

Southeast University — Computer science & engineering, BSC

Aug 2023 — May 2027 | Dhaka, Bangladesh