MOHAMMED MONJORUL HOQUE

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Education

York University   **Sep 2023 – May 2027 (Expected)**
Bachelor of Science in Computer Science (Honours)   *Toronto, ON*

Relevant Coursework

Data Structures, Advanced Object-Oriented Programming, Programming in Python, Software Tools, Logic & Computation, Theory of Computation

Relevant Projects

Transactional Order & Payments Platform

NestJS, TypeScript, PostgreSQL, Prisma, Stripe, Docker — 2024

- Constructed a transactional order-processing backend enforcing ACID guarantees, safely handling concurrent checkout requests without inventory inconsistencies
- Defined a 6-state order lifecycle with strict transition rules, preventing invalid state changes during payment and fulfillment flows
- Connected Stripe payments through server-side webhook verification, handling success, failure, and retry scenarios without client trust
- Enforced JWT-based role separation (Admin / Customer) and persisted audit records, capturing all inventory and order mutations for traceability

Event Processing Platform

NestJS, TypeScript, PostgreSQL, Redis, BullMQ, Docker — 2024

- Structured an event-driven backend using Redis queues to decouple producers from consumers and support multiple independent event handlers
- Persisted events in PostgreSQL to allow safe replay and reprocessing across 5+ distinct event types
- Orchestrated background workers with BullMQ to process events asynchronously and in parallel, keeping API requests non-blocking

Webhook Delivery System

Node.js, TypeScript, ExpressJS, PostgreSQL, Redis, BullMQ, Docker — 2024

- Assembled a reliable webhook delivery service providing at-least-once delivery guarantees to external HTTP endpoints
- Applied retry policies with exponential backoff and bounded attempts, improving resilience against transient network and downstream failures
- Recorded every delivery attempt in PostgreSQL with response codes and latency data to support observability and debugging
- Protected outbound webhooks using HMAC signature verification, mitigating payload tampering and spoofing risks
- Routed permanently failing deliveries to a dead-letter queue, enabling inspection and manual replay without data loss

Technical Skills

Languages: TypeScript, JavaScript, SQL, Python, Java, C
Frameworks / Technologies: NodeJS, NestJS, ExpressJS, ReactJS, PostgreSQL, Redis, BullMQ, REST APIs, JWT Authentication, Supabase
Developer Tools: Git, GitHub, Docker, Docker Compose, GitHub Actions, CI/CD, Postman, VS Code

Extracurricular

UNHACK Hackathon   **Jan 2024**
Participant

- Created a project-collaboration prototype enabling students to post project ideas, define roles, and review applicants
- Worked in a time-boxed hackathon setting to scope requirements and deliver a functional demo