

# Mohammad Qudah

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## EDUCATION

### York University

#### B.Sc. Computer Science with Honours

Toronto, ON, Canada

Sep. 2020 – Jun. 2025

## EXPERIENCE

### Sun Life Financial

#### Software Engineer Intern

Aug. 2023 – Dec. 2023

Toronto, ON, Canada

- Built **Kafka Streams** applications in **Java** to transform and repartition event data, scaling to **2x** more consumers
- Contributed to a distributed **Kafka pipeline**, offloading database load by streaming over **100,000 JSON** events daily to **20+ microservices**, cutting query load by around **30%** while sustaining **50 ms** end-to-end delivery
- Redesigned **MongoDB** schemas and implemented compound indexes, accelerating overall query performance **32%**
- Documented **5+** Kafka components and collaborated with engineering, QA, and business teams during **Agile** sprints

### eWorx Technology

Jan. 2023 – Aug. 2023

#### Software Developer (Contract)

Remote

- Led a server-side restructure within a **Scrum** team, migrating from **Django** to **FastAPI** for faster execution and leveraging **async** request handling to support higher concurrency, achieving a **36% reduction** in response latency
- Enhanced **CRUD** operations with **MongoDB** projection and schema updates, boosting data retrieval speed **30%**
- Modularized complex **React components** to improve overall reusability, resulting in **25%** faster development cycles
- Streamlined **CI/CD** pipelines by automating Jenkins builds and Docker packaging, reducing deployment issues **40%**

### AIMS

Jan. 2022 – Dec. 2022

#### Software Developer Intern

Remote

- Optimized **CRUD** operations by refactoring **Spring Boot** logic and **MySQL** indexing, eliminating over-fetching that caused excessive backend filtering, cutting query time by **22%** under heavy load, while raising system **throughput**
- Collaborated with a software team to build, refine, and update product features driven by cross-team ticket requests
- Shipped a **React** document preview feature with rotation and zoom support, improving the HR process by over **15%**
- Developed **JUnit** & **Mockito** tests validating service logic, increasing test coverage **28%** and lowering regression risk

## PROJECTS

### GrantBridge | REACT, TYPESCRIPT, NODE.JS, EXPRESS.JS, PERPLEXITY API, AWS

[Live Site](#)

- Built a full-stack grant search platform using **React** and **Express** to simplify the search for funding opportunities
- Incorporated the **Perplexity Sonar API** into a modular **REST API backend**, implementing runtime **JSON schema** validation and structured payload handling to enable robust, accurate **LLM-powered** grant matching
- Deployed a **serverless** architecture on **AWS** with **Lambda** and **S3**, providing a reliable platform for **200+** users

### Collaborative Canvas | Go, GORILLA WEB SOCKET, REACT, REDIS, DOCKER, GCP

[Live Site](#)

- Engineered a concurrent **WebSocket server** in **Go** with **Gorilla WebSocket** to stream real-time chat and canvas events using **mutex**-protected connection maps and a centralized broadcast channel, ensuring consistent state **sync**
- Introduced **Redis** with **TTL** to store **WebSocket actions**, restoring shared event history upon client reconnection
- Constructed an interactive whiteboard interface in **React** and **TypeScript**, including live user count tracking
- Containerized** the backend with **Docker** before deploying it on **Cloud Run**; automated CI/CD with **GitHub Actions** and hosted the frontend on **Firebase** for **low-latency** global distribution

## TECHNICAL SKILLS

**Languages:** Java, Python, Go, TypeScript, JavaScript, SQL

**Frameworks/Libraries:** React, Spring Boot, Node.js, Django, FastAPI, JUnit/Mockito

**DevOps/Tools:** Git, Apache Kafka, Docker, Jenkins, GCP, AWS, Bitbucket

**Concepts/Architecture:** Microservices, CI/CD, RESTful APIs, WebSockets

**Databases:** MongoDB, MySQL, PostgreSQL, Redis