Mohammad Qudah

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EDUCATION

York University Toronto, ON, Canada
B.SC. Computer Science with Honours *Sep. 2020 – May 2025*

EXPERIENCE

Sun Life Financial Aug. 2023 – Dec. 2023
Software Engineer Intern *Toronto, ON, Canada*
- Implemented a **microservice pipeline**, processing **10,000+** files daily using **Apache Kafka** for distributed event streaming, reducing latency by **15%** and boosting throughput via optimized **JSON** parsing and parallel processing
- Developed **Kafka Streams** applications in **Java** to transform and route real-time events within the pipeline, increasing **JUnit** coverage by **25%** and enhancing reliability for internal tools used by over **5,000** employees
- Collaborated in **Agile Sprints** to redesign **MongoDB** schemas and implement compound indexes for nested document structures, decreasing query latency by **32%** and improving storage and retrieval of **100,000+** messages

eWorx Technology Jan. 2023 – Aug. 2023
Software Developer *Remote*
- Led a server-side refactor within a **Scrum** team, migrating a **Django API** to **FastAPI**, implementing async request handling to manage concurrent requests, achieving a **36%** reduction in average response latency
- Optimized **CRUD** operations using **MongoDB** query projection and targeted schema improvements for high-traffic collections, increasing data retrieval speed by roughly **30%** and refining backend maintainability
- Refactored **React** components into modular units to support a more scalable and maintainable codebase
- Contributed to **CI/CD pipeline** updates by automating builds with **Jenkins**, containerizing services using **Docker** and managing version control with **Git**, reducing deployment errors across staging and production

AIMS May 2022 – Dec. 2022
Software Developer Intern *Remote*
- Optimized employee data **CRUD** operations by refactoring **Spring Boot** service logic and applying index strategies in **MySQL**, reducing **API** response latency by **22%** through faster relational data retrieval
- Implemented a **React-based** document preview feature with rotation and zooming capabilities, reducing HR document processing operations by **20%** and cutting paper consumption by over **15%** through digital adoption
- Deployed unit tests using **JUnit** along with **Mockito** to validate service logic and **REST API** behavior through dependency mocking and assertion chaining, increasing test coverage by **28%** while reducing regression risk

PROJECTS

GrantBridge | REACT, TYPESCRIPT, NODE.JS, EXPRESS.JS, PERPLEXITY API, AWS
- Built a full-stack grant search platform using **React**, **TypeScript** and **Express** to simplify funding opportunities
- Integrated the **Perplexity Sonar API** into a **RESTful backend**, implementing modular **Express** routes with runtime **JSON** schema validation to power **LLM-driven** grant-matching logic and structured response handling
- Released to production with **AWS Lambda**, enabling **50+** users to discover scholarships and funding opportunities through a serverless deployment, eliminating manual server handling and scaling automatically with user demand

Collaborative Canvas | GO, GORILLA WEBSOCKET, REACT, TYPESCRIPT, DOCKER, GCP
- Engineered a concurrent **WebSocket** server in **Go** using **Gorilla WebSocket** to manage active sessions through thread-safe client maps and broadcast real-time canvas and chat updates through shared message channels
- Developed an interactive whiteboard interface with **React** and **TypeScript**, including live user count tracking
- Containerized backend with **Docker** and deployed to **Google Cloud Run**; automated **CI/CD** with **GitHub Actions** and hosted user side on **Firebase** for serverless delivery

TECHNICAL SKILLS

Concepts/Architecture: Microservices, Event-Driven Systems, CI/CD, RESTful APIs, Async I/O, WebSockets
Languages: Java, Python, Go, TypeScript, JavaScript, HTML, CSS
Frameworks/Libraries: React, Spring Boot, Node.js, Django, FastAPI, JUnit, Mockito
DevOps/Tools: Git, Apache Kafka, Docker, GCP, AWS, Postman, Firebase, Jenkins
Databases: MongoDB, MySQL