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

May 2023 - Dec. 2023

Toronto, ON, Canada

 $Software\ Engineer\ Intern$

- Built 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 10% 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 – May 2023

 $Software\ Developer$

Remote

- Led a server-side refactor, migrating legacy **Django API** to **FastAPI**, implementing async request handling and modular routing to manage concurrent requests efficiently, achieving a **40**% 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 42% and refining backend maintainability.
- Refactored **React** components into modular, reusable units, optimizing code maintainability and scalability.
- Integrated component updates into the CI/CD pipeline using Jenkins for automation, Docker for consistent builds and Git for version control, improving reliability and reducing deployment errors.

AIMS

May 2022 – Dec. 2022

Kuwait City, Kuwait

Software Developer Intern

- Enhanced employee data CRUD functions by optimizing Spring Boot backend services and MongoDB document-based storage, reducing API response latency by 30% as a result of efficient document retrieval.
- Resolved more than 100 bugs in a web-based Human Resource Management System, enhancing system performance
 and expanding JUnit test coverage by 18%, lowering bug recurrence and improving overall performance.
- Developed a **React-based** document preview feature with rotation and other capabilities, reducing HR document processing operation by over **50**% and cutting paper consumption by **20**% through digital adoption.

Projects

GrantBridge | React, TypeScript, Node.js, Express.js, Perplexity API, AWS

- Built a full-stack AI-powered grant discovery platform using React, TypeScript, Node.js and Express.js.
- Integrated **Perplexity Sonar API** to simplify eligibility rules and generate application prompts.
- 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.

Room Designer AI | REACT, VITE, TYPESCRIPT, NEXT.JS, OPENAI API, AWS

- Engineered a generative web application that creates room designs based on user-selected layout and style inputs.
- Designed a blueprint-style interface enabling users to drag and drop furniture and customize room dimensions.
- Deployed to AWS using Lambda and API Gateway to serve OpenAI-generated room images; supported 90+ custom user-generated designs.

TECHNICAL SKILLS

Languages: Java, Python, TypeScript, JavaScript, Go, HTML, CSS

Frameworks/Libraries: React, Spring Boot, Node.js, Next.js, Django, FastAPI

DevOps/Tools: Git, Apache Kafka, Docker, AWS, Postman, Google Cloud Platform, Jira, Jenkins

Databases: MongoDB, SQL