

Hussein Saab

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EDUCATION

Toronto Metropolitan University (*formerly Ryerson*)

Bachelor of Science in Computer Science, Co-op

- Faculty of Science Deans List: 2022 – Present

Toronto, Ontario

Sep 2022 – Apr 2027

EXPERIENCE

Software Engineer: Backend & Automation Intern

May 2024 – Present

IBM

Toronto, ON

- Developed and tested software for IBM Supply Chain Intelligence Suite's Provisioning, User Management, and Access Control team using a Microservices Architecture with Java, Spring Boot, Kafka, Redis, and Cassandra
- Engineered microservices designed to simplify user access control and group management within the software. The microservices streamlined the process of assigning users to groups, managing permissions and ensuring secure access to features and data
- Designed, developed, and deployed a Kafka monitoring microservice using Kubernetes on IBM Cloud and Docker, enabling real-time consumption and tracking of over 5 million events daily across **10+** microservices. Reduced manual monitoring efforts by **40%** and integrated the service with Instana dashboards through REST APIs, providing actionable insights into microservice health and performance.
- Implemented REST APIs and enhanced existing ones with advanced features such as cursor/offset-based pagination, retry mechanisms, caching strategies, and JWT authentication. These improvements drastically increased performance, resulting in scalability, strengthened security, and a **60%** reduction in response times.
- Automated integration and unit tests using JUnit, Mockito and Karate ensuring reliable software and API functionality and streamlined the testing processes with automated pipelines in Jenkins

Full Stack Developer

Jan 2025 – May 2025

myAIpathway.ORG

Toronto, ON

- Worked as a Full Stack developer with a part time schedule on an e-commerce platform for local farmers to sell their products online; utilizing Next.js, Tailwind and Typescript for the frontend and Node.js, Express, AWS RDS and JavaScript for the backend.
- Engineered scalable API architectures and service flows with Node.js and Express, validating endpoints using Chai to ensure top-tier performance and reliability
- Implemented a robust sign-up/login flow using Clerk to support social logins and multi-factor authentication, and created an intuitive settings page for profile management, email-based password updates, and notification preferences—leveraging Zustand for state management.
- Developed a download feature for sellers that streams order data into an Excel report using ExcelJS, delivering detailed insights such as order ID, date, amount, and status while efficiently handling large datasets.

Leader

May 2019 – Present

Canada Scouts

Toronto, ON

- Currently serving as a scouts leader, every Friday evening, leading and supervising a group of over **30+** children ranging from 8-11 years old; planning and organizing weekly activities, including games, crafts, and outdoor adventures, that are engaging and age-appropriate for the scouts group
- Organized and hosted **20+** camping events, sport tournaments and educational lessons, preparing scouters to become future leaders by encouraging community engagement

PROJECTS

SchoolMule: Student Management | *TypeScript, Next.js, Node.js, Express, PostgreSQL*

September 2024

- Developed a full-stack web application enabling teachers to manage student records, track grades, and generate automated report cards, reducing administrative workload by over **400** hours annually.
- Successfully deployed in underfunded schools, currently supporting over **40+** teachers in managing student performance and engagement.

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, HTML/CSS, TypeScript, C/C++, SQL, Rust, Bash

Frameworks: Spring, Spring Boot, Flutter, React, Next.js, Angular, Node.js, Express, Flask, Django, GraphQL

Developer Tools: Git, Docker, AWS, Jenkins, Kafka, Redis, Kubernetes, Linux/UNIX