

Mazin Haggag

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EDUCATION

UNIVERSITY OF TORONTO

Toronto, ON

Bachelor of Applied Science - Computer Engineering

Apr 2026

Relevant Coursework:

Computer Science: Algorithms, Data Structures, Programming, Software Engineering & Design, Deep Learning

Systems: Operating Systems, Databases, Digital Systems, Computer Hardware, Signals & Systems, Networks

TECHNICAL SKILLS

Languages: C/C++, Java, Javascript (Node.js, React), Go, Python (PyTorch, NumPy), HTML/CSS, NIOS II, VHDL

Tools: Git, Github, Linux, Docker, Kubernetes, Cloud (AWS, Azure), Postman, MongoDB, SQL, NoSQL, npm

EXPERIENCE

Federal Government of Canada

North York, ON

Full-Stack Software Engineer (Intern)

May 2024 – Aug 2024

- Migrated legacy Microsoft Access database to MongoDB, enabling concurrent data access across teams by eliminating the single-editor system bottleneck, driving a 35% increase in cross-team efficiency.
- Developed a web platform for database visualization and management with Node.js and React, optimizing data entry and retrieval with intuitive forms and a centralized dashboard, reducing data operation time by 30%.
- Integrated an automated data validation system that processed 100,000 initial records with 99% accuracy, validating each new record in real-time, saving 30+ hours/month of manual verification efforts.

City of Toronto

Toronto, ON

Full-Stack Software Engineer (Intern)

Jan 2023 – Apr 2023

- Designed and implemented a roadway project estimation platform, leveraging real-time data [visualizations](#) to enable interactive cost analysis, reducing estimation times from 3 hours to just 10 seconds.
- Developed a Python-based machine learning model with NumPy trained on historical project data, improving estimation accuracy by 22% and saving the city over \$500K annually in misappropriated funds.
- Engineered a secure infrastructure using Python and OAuth 2.0, implementing level-based access to sensitive project details and cost information while maintaining 100% uptime.

PROJECTS

Kojo AIO | kojoaio.com

Toronto, ON

CEO and Lead DevOps Engineer

Mar 2020 – Apr 2023

A software development startup focusing on web-store retail automation.

- Led a team of 6 in developing 10+ microservice-based solutions using Node.js and React, implementing and documenting RESTful APIs with Postman to ensure seamless service integration and scalability.
- Designed 25+ mockups for interface flow and application design, establishing a unified [project vision](#) across developers and reducing UI feedback cycles from 4 rounds to just 1.
- Transformed the platform to a cloud-native architecture on AWS (EKS, Lambda), eliminating client hardware and network dependencies to deliver consistent, reliable performance to 1,500+ users.
- Secured user payment and personal data using AWS (KMS, IAM), achieving PCI compliance while processing a cumulative \$150K in monthly transactions across all users.

Kraken Notify | krakennotify.com

Toronto, ON

CEO and Software Architect

Nov 2019 – Jan 2023

A subscription-based hub where sneaker enthusiasts converge, connect, and access specialized applications.

- Directed the development of a 7 application Software Suite across [iOS](#), [Chrome](#), Windows, and MacOS, securing the position as a market leader through unmatched innovation, which pushed a 30% yearly rise in user base.
- Built an integrated application ecosystem using Node.js, Express and AWS, enabling real-time synchronization across mobile, web, and browser platforms with websockets, supporting 2,000+ active users.
- Grew and managed a 30-person organization driven by a passion for delivering real value to users, achieving Whop.io's #1 community through our customer-first model, product excellence, and innovation.