

Ossama Elhelali

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EDUCATION

University of Waterloo - *Recipient of president's scholarship*
Candidate for Bachelor of Computer Science, Honors Co-op
Relevant coursework:

Compilers, Data Structures and Algorithms, Algorithm Design and Data Abstraction, Operating Systems, Object Oriented software design

Waterloo, ON

Sep 2022 - June 2027

EXPERIENCE

Software Engineer Intern

MedSender - *Ruby on Rails, Redis, Elasticsearch, Python, Docker, React*

New York City, NY

May 2025 - Present

- Designed and launched a **new API email system** by integrating Mailgun webhooks, building relational tables for messages/attachments, and **developing portal UI for developer management and AI processing**.
- Engineered an asynchronous, batched delivery system enabling **one-click distribution of documents to 50+ recipients**, reducing delivery time from minutes to seconds and manual work by **98%**.
- Achieved **99.3% provider recognition accuracy (+30% over baseline)** by architecting and fine-tuning a domain-specific NLP model and prompt, validated against golden datasets.

Software Engineer Intern

MedSender - *Ruby on Rails, Redis, Elasticsearch, Python, Docker, React*

New York City, NY

Jan 2025- Apr 2025

- Reduced transaction latency 90%+** by replacing a legacy RPA process with a 5+ feature API system, streamlining high-volume client workflows.
- Cut down ML hallucinations by 35% and latency 40%** by adding fuzzy detection and caching logic.
- Accelerated onboarding time by 90%** by Dockerizing the app and incorporating SQL, Redis, and ELK stack.

Software Engineer

IIC UWaterloo - *Typescript, Next.JS*

Waterloo, ON

May 2024 - Aug 2024

- Developed multiple sponsor pages** that curated to each clients' highlights and benefits.
- Improved search performance by 20%** through implementing dynamic filters and optimizing database sanitation.
- Cut email manual errors by 30%** through automated email workflows using Google App Script.

Fullstack Developer Intern

Kenna Technologies - *Typescript, React.JS, SQL, Node.JS, Express.JS*

Mississauga, ON

Jan 2024 - Apr 2024

- Led the migration of a full-stack service** from Lotus Notes and HTML to Typescript, React, Node, and SQL.
- Reduced API overhead by 87.5%** through deep analysis of workflows and callbacks, improving overall performance.
- Created SQL backend and middleware agents to represent data in a visually appealing format on the frontend.

Software Engineer

Coach Chihab Group - *Vue.JS, Firebase*

Burlington, ON

Sep 2023 - Dec 2023

- Built a check-in platform that **reduced guest check-in time by 95%** and managed over 50 attendees.
- Utilized Firebase Real-time Database API for **dynamic attendee check-in monitoring** and visualization.

Software Engineer Intern

MD - *Vue.JS, PHP*

Burlington, ON

May 2023 - Aug 2023

- Reduced API overhead by 34%** through payload size reduction and lazy loading implementation.
- Cut drop-off rates by 12%** by streamlining the signup and data collection process.

PROJECTS

LinkedPin - *Java, Spring Boot, PostgreSQL, AWS Elastic Beanstalk, OpenAI API, React.js*

- A Chrome extension that summarizes and automates reminders for saved LinkedIn posts for tens of users.



Chess - *C++, Bash, XQuartz*

- Engineered a multiplayer chess engine in C++ (OOP) with a 4-tier AI computer player.

AWARDS

1st place - **Microsoft's** Green-a-thon - *Python, PowerBi, Power Automate, Digital Twins, Azure HSM*

- Developed a construction materials marketplace to reduce waste and promote sustainability.

1st place - Seeds of Leadership's AI Summit - *Python, OpenAI's API*

- Designed an AI-driven web-scraping tool to automate grant discovery and applications for SmileCanada (NGO).

TECHNICAL SKILLS

Languages: C++, C, Python, Ruby, Java, Go, JavaScript, TypeScript, SQL, PHP

Frameworks: Express.JS, Spring Boot, Rails, TensorFlow, OpenCV, Keras, Next.JS, React.JS, Vue.JS, React Native

Developer Tools: Docker, Kubernetes, AWS RDS, AWS EC2, AWS Elastic Beanstalk, Firebase, Elasticsearch, Linux