

# YOUSEPH ELKHOULY

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## Education

### University of Guelph

Bachelor of Computing, Major in Computer Science

September 2023 – April 2027

GPA: 3.7

**Coursework:** Data Structures & Algorithms, Discrete structures in computing I & II, Object-Oriented Programming, Linear Algebra, Database Systems & Concepts, Web Development, Parallel Programming, Operating Systems.

## Technical Skills

**Languages & Database:** Python, Java, Javascript, Typescript, SQL, PostgreSQL, MongoDB, Firebase.

**Frameworks & Tools:** React, Redux, Express, Spring, Flask, AWS, Docker, Jest, Pytest, Git, CI/CD.

## Experience

### Stylus Marketing · Software Engineer Intern

May 2024 – August 2024

Python · Typescript · PostgreSQL · AWS (SQS, Lambda, & EventBridge) · React · Express

Toronto, Ontario, Canada

- Engineered a serverless inventory tracking and management service adopted by **50+** clients, delivering scalable, cost-efficient operations.
- Architected an automated, event-driven Stripe integration for overdue charge recovery, incorporating dynamic retry logic and real-time alerts to boost payment reliability and accelerate resolution times by **75%**.
- Implemented intuitive dashboards for payment and inventory management, leveraging WebSockets for instant data synchronization and delivering a seamless, user-friendly interface that reduced user onboarding time.

## Projects

### SyncWatch | Python · Flask · TypeScript · React · AWS (Lambda and DynamoDB) · Docker

- \* Developed a Chrome extension enabling synchronized video playback on platforms like 123Movies, Soap2day, and YouTube for real-time shared viewing among multiple users.
- \* Built a serverless backend to manage client sessions, connection states, and persistent user data.
- \* Implemented real-time video synchronization and instant communication using WebSockets and designed an intuitive UI for session control and interaction.

### Merchant | TypeScript · Python · React · Flask · AWS · Docker · PostgreSQL

- \* Developed a full-stack web application that aggregates listings from multiple second-hand marketplaces, providing users with a centralized platform to discover sellers efficiently.
- \* Built a web scraping pipeline using BeautifulSoup to collect and process listing data from platforms such as Kijiji and Facebook Marketplace.
- \* Integrated Twilio API to deliver SMS notifications when new listings matched user-defined keywords and preferences.

### Statify | TypeScript · React · Express · AWS · Docker · PostgreSQL

- \* Developed a Chrome extension leveraging TypeScript and React to autofill job application forms and extract applicant details simultaneously.
- \* Built a full-stack web application to organize and track job applications, providing automated notifications for status updates.
- \* Created web scraping scripts with to independently retrieve candidates' application statuses from job portals like Workday, SSJobs, and SuccessFactors.
- \* Designed an email classification system utilizing a Naïve Bayes classifier and Gmail API to detect and filter application-related emails.

## Extra Curricular Activities

### SparkAndPrepper · GDG HACKS 2025: Build with AI

March 2025

React · Express · Typescript · Firebase · MongoDB

Devpost

- \* Created an AI-powered web platform that transforms uploaded course materials into interactive learning tools, such as study guides, flashcards, cheat sheets, and mock exams.
- \* Engineered backend services for document upload, parsing, and integration with the Gemini API to generate structured academic content.
- \* Utilized Firebase for file storage and access, and MongoDB for user authentication, session handling, and metadata management.
- \* Implemented prompt engineering strategies to enhance the relevance and precision of AI-generated content.