

Alex Li

Software Developer

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Objective

Waterloo CS student with a genuine interest in developing elegant software to solve real-world problems seeking a position as a Software Developer.

Summary of Qualifications

Programming Languages: Java (2 years) / Python (9 months) / C++, C# (7 months) / JavaScript (4 months) / C (2 months)

Skills: Git / Linux / Firebase (Cloud Firestore, RTDB, Functions) / REST API / Open Source / Angular / MySQL / React

Education

Bachelor of Computer Science - University of Waterloo, Waterloo, ON

Sept 2020 - May 2025

- President's Scholarship of Distinction | Term Distinction

Projects

React Chess Engine

January 2021 - February 2021

- Created a chess AI web application using the **React** framework with **TypeScript** and **JavaScript**.
- Implemented the chess engine using the **Minimax Algorithm** with **Alpha-Beta Pruning**.

Personal Website

December 2020 - January 2021

- Designed a responsive personal website with clear, appealing visuals using **HTML**, **CSS**, and **Javascript**.
- Implemented a **REST API** to handle requests to **Cloud Firestore** and **Firebase RTDB** using **Nodejs** and **Express**.
- Combined Google's **Custom Search JSON API** with a custom web scraper to gather inspirational quotes by topic or search relevance, providing a more personalized experience for the user.

Genetic Algorithm ML

January 2021

- Modelled a **Feed Forward Neural Network** in Python to teach a block to jump over incoming obstacles.
- Applied the **Genetic Algorithm**, selecting the phenotypes from the last surviving block in each generation to modify the weights and biases of the network.

Experiences

Computer Studies TA

January 2020 - June 2020

- Engaged in **active learning** through teaching, assisting the course instructor in delivering course content to the class and explaining concepts tailored to individual learning styles (verbal description, diagrams, analogy).
- Assisted the instructor in designing a new course module on Game Design in Python and assessed the level of difficulty to determine if it would be suitable for grade 11 students.

Abbey Park Vex Robotics Club Founder

May 2018 - June 2020

- Established a supportive community for like minded individuals that share a love for STEM and making robots.
- Demonstrated ability for both leadership and being a team player through creating weekly learning material for members (CAD, build, and code), as well as being attentive to the needs of each member.