

Alex Li

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Summary of Qualifications

Languages: Java (2 years) / Python (8 months) / C#, C++ (6 months) / HTML, CSS, JS (3 months)

Technologies: Git / ROS / CAD / 3D Printing / Bash / Linux / Vim / Unity Game Engine / XML / JSON / MySQL / Firebase / NoSQL / Arduino / Raspberry Pi / IoT

Education

2020 - 2025

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

- President's Scholarship of Distinction | Term Distinction

Projects

Personal Website

<https://1liale.github.io/PersonalWebsite/>

- Created an original webpage using **HTML**, **CSS**, and **JavaScript** to provide a clear visual representation of my coding experience and creativity.
- Implemented an interactive gallery that strongly demonstrated my interest in **STEM**.
- Accessed the **Firebase API** to sync data to a **NoSQL** real time database, tracking the amount of time users spend per section and displaying related data using **Google Charts**.

BlackJack-Trainer

<https://github.com/1liale/BlackJack-Trainer>

- Created an educational program in **Java** to train users at the card game BlackJack using card-counting and basic strategies.
- Applied **Object Oriented Programming** to organize game elements into a structured hierarchy and implemented **FileIO** to read the basic strategy chart stored in a text file.

EvolutionGame AI

<https://github.com/1liale/EvolutionGame>

- Created a 2D **Python** game using the **PyGame** module and modelled a **neural network** using the **Numpy** library to experiment with game design in python.
- Explored ML using the **Genetic Algorithm** to modify the weights and biases of the network.

RollingBall Game

<https://github.com/1liale/RollingBall>

- Created a clean, engaging windows desktop game where users control a ball rolling down a hill to collect coins and avoid obstacles along the path.
- Developed the game using the **Unity Game Engine** with scripts coded in **C#** and custom-made game assets, including satisfying ball collision animations made with the help of **Blender**.

Work Experience

August 2018 - March 2020

YMCA Lifeguard and Instructor, Oakville, ON

- Demonstrated positive leadership, responsibility and decision making skills when creating weekly lesson plans to instruct patrons at the YMCA.
- Communicated effectively with patrons and staff, with emphasis on teamwork and initiative, to deliver a cohesive and safe work environment.