

WILLIAM ZHOU

✉ w35zhou@uwaterloo.ca

in [william-zhou-472a482a8](#)

🔗 [WilliamLZhou5](#)

OBJECTIVE

Dedicated Honours Mathematics student at the University of Waterloo seeking 4 month summer coop opportunities to apply mathematical and programming skills in a dynamic environment.

SKILLS

Languages: C++, Java, Python, JavaScript, HTML/CSS

Developer Tools: Github, VS Code, IntelliJ, Replit, CodeBlocks

Libraries and Frameworks: NumPy, Pygame, node.js, Matplotlib, Requests

PROJECTS

League Ping Bot | *Python, Discord.py, Matplotlib, NumPy, Requests*

- Developed **API scraper** that extracts key information from a **game API** that writes to JSON file
- Implemented a **Discord bot** that efficiently reads and writes data to and from JSON file
- Discord bot sends messages based on information read from **JSON** file

3D Maze Renderer | *Python, Pygame, NumPy*

- Created **3D Rendering engine** for automatic maze generator by using randomized **depth-first** search algorithm
- Self implemented 3D rendering by implementing **ray casting** and using **trigonometric formulae**

Liberty Tax Service Website | *JavaScript, HTML, CSS*

- Designed front end of interactive website that using HTML, CSS, and JavaScript

EXPERIENCE

YMCA of Oakville

September 2021 – August 2023

Swim Instructor and Lifeguard

Oakville, ON

- **Instructed** and **supervised** swim lessons for various age(6-16) groups and skill levels
- Developed strong **planning** and **creativity** skills by creating unique lesson plans specially dedicated to each individual and/or class
- On average, participants swim technique improved over **60%** throughout each term

Oakville Aquatics Club

September 2012 – August 2023

Competitive Swimmer

Oakville, ON

- Achieved over **20h** of committed competitive training swimming per week at the Oakville Aquatics Club
- Proficient in **time management** and strong **work ethic** due to rigorous schedule

EDUCATION

University of Waterloo

2023 - 2028

Candidate for Bachelor of Mathematics, Honours Mathematics

Waterloo, ON

Abbey Park High School

2019 - 2023

Graduated with Honours

Oakville, ON