

Alan Bui

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EDUCATION

- **Vincent Massey Secondary School** Sept. 2020 - June 2024
Honour Roll with Distinction, 4.0 GPA Windsor, ON

PROGRAMMING SKILLS

- **Languages:** Python, C++, Java, HTML, CSS, JavaScript, MySQL, Dart, R
- **Technologies:** React, Node, Express, Firebase, PyTorch, NumPy, pandas, Git, Flutter

EXPERIENCE

- **University of Windsor** Windsor, ON
Research Assistant June 2023 - Present
 - **ChatGPT:** Compared 3 different fine-tuning methods for classification tasks using **Python**.
 - **BERT:** Investigated fine-tuning methods for binary classifications using **PyTorch** and **pandas**
- **Vincent Massey Computer Science Club** Windsor, ON
Teacher Sept. 2022 - Present
 - **Lesson Plans:** Created lesson plans to teach high school students algorithms and data structures using **Python** and **C++** (e.g. Dijkstra's, stacks, queues) in preparation for the Canadian Computing Competition.
 - **Contest Problem Setter:** Developed **30+** programming problems with editorials based on the material taught in lessons. Validated contest submissions by creating test cases and judging them on DOMJudge.
- **MasseyHacks IX** Windsor, ON
Organizer Sept. 2022 - Present
 - **Organizer:** Planned and hosted Canada's oldest high school hackathon for **130+** attendees.
 - **Mentor:** Assisted participants with their projects in **HTML**, **CSS**, **JavaScript**, and **Python**.
- **Windsor Chess Enrichment Program** Windsor, ON
Co-founder and Web Developer Sept. 2022 - Present
 - **Co-founder:** Planned logistics and curriculum for a chess club to support **100+** youth.
 - **Author:** Wrote and published a chess book, giving free access to **9000+** individuals.
 - **Web Developer:** Developed and maintained the website on **GitHub Pages**, made posts using **Markdown**, and curated specialized training programs using **React**.

PROJECTS

- **Fast Slow Debugger** Waterloo, ON
Hack the North Sept. 2022
 - **Debugging tool:** In a team of two, created a debugging tool that runs two Python programs to compare their outputs against inputs from a test set generator and presents any mismatches. Used **Python** to take code files, execute them, and compare the outputs against test sets. Added support for **Java** after Hack the North.
- **EchoChess** Windsor, ON
MasseyHacks VIII May 2022
 - **Discord Bot:** Built a Discord bot in **Python** to allow users to input a picture of a chess scoresheet and output a pgn file of the recorded game and analyze a player's most recent Chess.com game.
 - **Amazon Textract:** Used **Amazon Textract API** to scan images for text and used **Python** to organize strings into the correct format and correct commonly misinterpreted letters and numbers.

ACHIEVEMENTS

- **Hypatia Mathematics Contest** – Rank 1 in Canada, 2023
- **Euclid Mathematics Contest** – National Honour Roll, 2023
- **Canadian Computing Competition** – National Honour Roll, 2021-2022