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**EXPERIENCE**

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**Private Tutor**

Sep. 2021 - Feb. 2022

- Tutored Calculus 1 for first year university students.
- Tutored Introductory Classical Mechanics courses for first year university students.
- Grades increased on average by 15%.

**DriveSports Badminton | Coach**

Jun. 2019 - Jun. 2022

- Led groups of beginner youth students, and taught them badminton fundamentals.

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**TECHNICAL SKILLS**

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**Programming Languages:** Python, C/C++, VHDL, HTML, CSS**Tools:** Git, MATLAB, L<sup>A</sup>T<sub>E</sub>X, Excel

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**PROJECTS**

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**Interactive Chess Board:** A 4x4 interactive chess board made as a teaching tool for beginners.

- Used an Arduino and hall sensors to track pieces.
- Led design for processing sensor inputs and tracking pieces.
- Highlights legal moves when pieces are picked up, and flags illegal moves when made.
- Made primarily in python, using the library pyfirmata.

**Minecraft CPU:** An 8-Bit CPU created in Minecraft.

- Made purely using Minecraft circuitry (redstone).
- Capable of adding, subtracting, bitshifts, conditional jumping, and Boolean algebra.
- Clock speed of 0.25Hz, 8 Bytes of register storage.
- Test programs included calculating the Fibonacci sequence, and finding the product of two numbers.

**OnitamaAI:** AI that plays the board game Onitama.

- Made in python, implemented using a minimax algorithm with alpha-beta pruning.
- Capable of beating most human players.

**Quine-McCluskey Solver:** A tool that implements the Quine-McCluskey algorithm

- Takes a list of minterms, don't cares, and a size, and returns a simplified boolean expression.

**BlockPusher:** A sokoban style puzzle game made in python using pygame. with a few unique variations on the standard rules.

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**AWARDS**

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**Canadian Computing Contest Senior (2022):** Certificate of Distinction**Canadian Open Mathematics Challenge (2021):** Performance with Distinction

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**EDUCATION**

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**University of Waterloo**

Bachelor of Software Engineering

Waterloo, ON

Sep. 2022 – Present

**Henry Wise Wood High School**

Alberta High School Diploma; IB. Diploma

Calgary, AB

Sep. 2019 - Jun. 2022