Ethan Huang

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Education

Carleton University, Ottawa ON ***(11.13/12 CGPA)***

- Golden Key Award (Top 15% in program)
- Electrical Engineering
- Undergraduate (2024 - present)

Earl of March Secondary School, Ottawa, ON (90% GPA)

- OCDSB Honour Society Award & Silver Star Medalist Award (2021-2022)
- French Immersion(2020 - 2022)

Technical Skills

- Developed digital circuits using **Verilog** HDL, validated functionality through test bench simulations, and implemented designs on an **FPGA** board to ensure reliable hardware performance.
- Utilized **Python** to organize and analyze datasets, and developed custom scripts with **Matplotlib** to generate graphs, which helped visualize results.
- Utilized **Fusion 360 to mode**l, simulate, and optimize mechanical components such as a robotic arm, compressed air engine and brushless DC motor for 3D printing and prototyping.
- Designed and simulated electronic circuits in **Multisim Live** to verify functionality prior to physical prototyping, to improve accuracy and reduce design errors.
- Built and assembled electronic components, performing **soldering and wiring** to create dependable circuits, and reinforcing hands-on technical skills.
- Applied **C programming** to solve computational problems using arrays, loops, and recursion.
- Utilized **oscilloscopes**, **multimeters**, **waveform generators**, and other electronic test equipment in a laboratory environment to analyze and design circuits.

Work Experience

Hockey Sushi, Kanata, Ottawa, Ontario (April 2024-August 2025)

- Provided attentive customer service by delivering food and addressing guest needs, ensuring a positive dining experience
- Supported team efficiency by clearing tables and resetting dining areas quickly, enabling smooth turnover during high-traffic periods
- Prepared miso soup, drinks, and other small menu items to support kitchen operations and ensure timely service for guests

Extra - Curricular Activities

- EOM Frc Robotics Club (2023 - 2024)
- Volleyball (2017 - 2020)
- Band (2018 - 2021)
- Jazz Band (2019 - 2020)
- Public Speaking Club (2022)

Applied Projects / Portfolio

https://695f06bfdcf643777e3040a6--charming-horse-7d8fc2.netlify.app/

Arduino Robot Arm (Design & Build)
December 2025

- Arduino circuit design and assembly
- Used breadboard to prototype circuit functionality
- Wrote scripts in the Arduino IDE using C++ to control and test the robot arm
- Learned how to apply and manipulate servo motors using an arduino
- Learned how to use a potentiometer to control circuit output
- Strengthened 3D CAD skills to design robot arm chassis and gears

Vehicle Brake Light FPGA Board Simulation (Design)
November 2025

- Designed and simulated a vehicle brake and turn-signal control system using Verilog HDL
- Implemented sequential and combinational logic with D flip-flops and clock division
- Verified functionality using testbench simulations in Xilinx Vivado
- Synthesized and deployed the design on a Nexys A7 FPGA board

Brushless DC Motor (Design & Build)
January 2025

- 3D printed brushless DC motor
- Parts: Lipo battery, ESC. Copper Wire, Servo Tester, Permanent Magnets
- Designed the body of the motor using fusion 360, and 3D printed it using a Bambu Lab P1
- Winded and stripped copper wires for electromagnets
- Soldered wiring of components
- Applied theory of electromagnets and function of DC motors

Languages

- English (Fluent)
- French (Fluent)

Availability

Available for 4-12 months beginning May 2026