Daniel Hyman

(437) 972–3605 | Email | Portfolio | GitHub | LinkedIn

Education

University of Guelph Guelph, ON
Bachelor of Engineering: Engineering Systems and Computing (Co-op) Expected Spring 2029
Relevant Courses: Engineering Design, Digital Hardware, Mechanics, Object Oriented Programming

Technical Skills

Software: SolidWorks, AutoCAD, KiCAD, OnShape
Programming: Python, MATLAB, C/C++, Java, VHDL
Frameworks: Django, FastAPI, React, RestAPI, Node.js
Developer Tools: Arduino/ESP32, Vivado, Git

Experience

Electrical Engineer | *Robotics Club* | *KiCAD, STM32Cube, C++* Sept 2024 – Present

- Collaborating with the electrical team to design and implement all drive boards for a six-legged rover for the **Canadian International Rover Competition (CIRC)**
- Designed a DVR8871 motor driver schematic and PCB implemented on the Drive Board using KiCAD

Logistics Assistant | *Startup* Sept 2022 – Jun 2024

- Managed and organized documents and pre-packaged products for unique client orders in a timely manner
- Used Excel, scanners, and Microsoft Teams to track orders and inventory

French Elementary Teacher Assistant | *Toronto Heschel School* Sept 2023 – May 2024

- Assisted French Immersion students, **grades 2–5,** with reading, pronunciation, and comprehension
- Designed and adapted interactive PowerPoint lessons based on weekly feedback

Projects

Robotic Arm | *SolidWorks, ESP32, C++* Sept 2025 – Present

- Constructing a 3D printed, multi-jointed, **3-DOF** Robotic Arm powered by a ESP32 microcontroller
- Calculated a **110 g payload capacity** using 1.9 kg cm servo motors, optimizing torque and reach
- Programmed a bluetooth mobile app to control all motors and swap between custom modes

Automated Mini Vehicle | *AutoCAD, Excel, Arduino, C++* Oct 2024 – Dec 2024

- Produced a **fully automated** vehicle, equipped with a course-navigation system, automated trash launcher, and user safety system, overseeing chassis design, sensor integration, and Arduino vehicle logic
- Created **ASME Y14.5** AutoCAD isometric sketches for center of mass calculations
- Successfully completed all challenges, including carrying a **4 kg payload** up a ramp

Four-bit Arithmetic Logic Unit | *VHDL, Vivado, FPGA* Sept 2025 – Nov 2025

- Developed an ALU capable of 8 arithmetic and 4 logic operations.
- Designed hierarchical digital logic from half-adders to a 4-bit ALU and 7-segment **FPGA** display
- Simulated all input combinations and optimized FSM and logic equations

Leaf Watch | *Python, React, FastAPI, Node.js, NASA API* Nov 2025

- Uses **NASA satellite data** to monitor deforestation rates and an **ML model** to predict future trends
- Implemented the map UI and timelapse feature to visualize deforestation, data analytics through the **NASA API**, and ML model training