Daniel Hyman

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Introduction

Creative Systems Engineering student with a passion for Robotics and Automation. Seeking co-op Engineering opportunities to apply 3D CAD, digital hardware, and programming experience to solve real-world problems.

Education

University of Guelph — Expected Grad
Bachelor of Engineering in Engineering Systems and Computing (Co-op) — Spring 2029

Technical Skills

Software: SolidWorks, AutoCAD, KiCAD
Developer Tools: Vivado, Arduino, STM32CubeIDE
Languages: C/C++, Python, MATLAB, Java, VHDL
Workflow: FPGA, Soldering, Oscilloscope, Git

Professional Experience

Electrical Engineer – Robotics Club | *KiCAD, STM32Cube, C++* — Sept 2022 – Present

- Collaborate 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 — 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 — 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

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

- Uses **NASA satellite data** to monitor deforestation rates and predict future trends
- Implemented Timelapse visualization, map UI, and data retrieval through the **NASA API**
- Designed for use by reforestation and conservation initiatives

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 display on the **FPGA** board
- Simulated all input combinations and optimized FSM and logic equations

Automated Car | *C++, Arduino, AutoCAD, Excel* — Oct 2024 – Dec 2024

- Developed a **fully autonomous** vehicle, Equipped with a course-navigation system, automated trash launcher, and user safety system, overseeing Arduino vehicle logic, sensor integration, and debugging
- Created 2D AutoCAD models and orthographic sketches
- Met all challenges including obstacle navigation, trash launching, and carrying a 4 kg payload up a ramp