Daniel Hyman

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Introduction

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

Education

Bachelor of Engineering in Engineering Systems and Computing (Co-op), *University of Guelph* Sept. 2024 - Apr. 2029

Professional Experience

Electrical Engineer - Robotics Club | KiCAD, STM32cube, C++ Sept 2025 - Present

- Collaborating with the Electrical team to design and implement all Drive Boards for a 6 legged rover for the **Canadian International Rover Competition(CIRC)**
- Designed a DVR8871 chip schematic and PCB to be implemented on the Drive Board using **KiCAD** software

Logistics Assistant Sept 2022 - June 2024

- Managed and Organized Documents, as well as Prepackaged Products for unique client orders in a timely fashion
- Used Excel, scanners, and Microsoft Teams to keep track of orders and products

French Elementary Teacher Assistant Sept 2023 - May 2024

- Assisted French Immersion, **grades 2 to 5** students with reading, pronunciation and comprehension through developing and executing interactive lesson plans
- Adjusted and adapted future lessons based on weekly feedback and **personal reflection**, ensuring the most meaningful and memorable class for the students

Mentor Executive Nov 2023 - June 2024

- Directed a **Mentorship program** for all incoming grade 9 students, involving social and academic support groups, as well as many events such as grade 9 day and leadership night, receiving high praise
- Adjusted and adapted resources to different events, and ideas based on monthly feedback, ensuring the most meaningful first year of high school

Projects

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

- Uses **NASA satellite data** to monitor deforestation rates across the world and predict future trends
- Implemented visual **Timelapse feature**, map UI, and data retrieval through the **NASA API**
- Designed to be used by reforestation and nature protection initiatives to optimize replantation locations

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

- Developed an ALU that could perform 8 arithmetic operations and 4 logic operations
- Hierarchical structure, from designing half adders to the 4-bit ALU and 7-segment display on the **FPGA** board
- Optimized the digital logic equations and **FSM**, visualized the system with block diagrams, implemented hierarchical **VHDL** files, and simulated every output combination using the IDE Test Bench

Automated Car | C++, Arduino, AutoCAD, Excel Oct - Dec 2024

- Collaborated in a multidisciplinary team of 5 Engineers to design, construct, and program a **100% Autonomous** Car for a teddy bear, equipped with a course-navigation system, automated trash launcher, and user safety system
- Oversaw **C++ Arduino** vehicle logic and debugging, sensor implementation, and created 2D **AutoCAD** model sketches and an orthographic sketch
- Overcame all predefined challenges including: Navigating the course, throwing trash over a 30 cm wall and into a bin, and carrying **2 kg** of load up a ramp

Technical Skills:

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