Daniel Hyman

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Introduction:

Creative and driven Systems Engineering student, with a passion for Robotics and Embedded Systems. Seeking co-op Engineering opportunities to apply CAD, programming, and design experience and solve real world problems.

Technical Skills:

Software: SolidWorks, AutoCAD, OnShape, KiCAD
Languages: C++, Python, C, Java, Javascript, VHDL
Platforms and IDEs: Git, Arduino, STM32cube, VS Code
Frameworks & Tools: Django, Flutter, React, Node.js, AWS

Education

BEng in Engineering Systems and Computing (Co-op), *University of Guelph* — Expected Grad: Spring 2028

- Courses: Engineering Design, OO-Programming, Mechanics, PCB Design, Electricity & Magnetism

Projects

Leaf Watch | Python, JavaScript, React, FastAPI, NASA API, Node.js — Nov 8-9 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

Robotic Arm | OnShape, CAD, C++, ESP32 — Sept 2025 - Present

- A **360 degree rotating**, multi-jointed Arm, able to pick up objects with a magnetic hand, controlled by a joystick.
- Parts designed and simulated on OnShape **CAD software**, programmed onto an **ESP32** microcontroller and prototypes **3D printed** and wired with DC motors

Electrical Engineer - Robotics Club | KiCAD, STM32cube — Sept 2024 - Present

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

Trackify | JavaScript, HTML, CSS — Apr - Aug 2025

- A simple and powerful **Chrome Extension** for creating and managing notes directly from any browser, implementing the **Chrome Storage API** for local data saving
- Designed for researchers to efficiently capture and recall relevant website text and attach personal pointers

Weather Safety Application | JavaScript, Python, Django — Jun 28 - 29 2025

- Built a full stack **Django** web app with REST API endpoints and geospatial logic(GeoJSON, Shapely) to help track friends' locations and disaster zones in real-time
- Integrated **Leaflet.js** and **Kontur Disaster API** to visualize live maps, manage friends' locations, and implement proximity alarms

Zumo Bot Competition | C++, Arduino — Dec 2024

- Developed a **100% Autonomous** robot in a team of 3 during a 3 hour University tournament, designed to detect and push other opponents out of an arena, finishing **2nd** out of 20
- Programmed the **Ultrasonic and Infrared** sensors to charge when 15 cm away, and avoid the boarder
- Implemented a model, detailing how the sensors and mechanical parts come together onto the Zumo Bot, considering mass, size, balance, and the optimal weapon size

Automated Vehicle | C++, Arduino, AutoCAD — Oct - Dec 2024

- Collaborated in a team of 5 Engineers of different disciplines 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, using household items and a meccano kit,
- Oversaw **C++ Arduino** vehicle logic and debugging, electrical circuitry to different sensors and components, and designed sketches of the model as a whole
- Overcame all predefined challenges including: Navigating the course, throwing trash over a 30cm wall and into a bin, and carrying **2 kg** of load up a ramp

Professional Experience

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

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