

Isaac Man

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SKILLS AND AWARDS

Skills: Java, Python, JavaScript, C++, HTML, CSS, KiCad, Onshape, Fusion 360, Solidworks, AutoCAD

Awards: Winner of FRC Ont. District Durham College Event, FRC Innovation in Control Award, FRC World Championship 9th place in Curie Division, Bronze Medalist Ont. Skills Competition: Mechanical CAD Category

PROJECTS

- Nutrition Tracker Website** | *Firebase, JavaScript, HTML, CSS* Sept. 2025 - Present
- Developed a responsive **web application** to track daily nutrition and calorie intake
 - Integrated **Firestore** for user authentication and real-time database storage of nutrition logs, and **AI** to generate personalized feedback/meal recommendations based on user data
- Waterloo Electric Vehicle Challenge** | *Onshape, Fusion 360, Autodesk CFD* Dec. 2024 - June 2025
- Collaborated with **20 high school students** to design, manufacture, and wire a 12 volt electric vehicle achieving a **top speed of 40 km/h**, demonstrating high proficiency in control systems, mechanical design, and electronics
 - Applied **Computational Fluid Dynamics** simulations to optimize the aerodynamic performance of the vehicle
- Can-Sat Miniature Satellite** | *Arduino, C++, Fusion 360, 3D Printing* April 2024 - May 2024
- Constructed a mini satellite to detect temperature, air pressure, and acceleration, using a **BMP 280** and **MPU 6050** sensor, which was soldered and wired onto an **Arduino UNO R3** board.
 - Designed a robust 3D printed chassis to withstand structural integrity when being **dropped 100+ meters high**

EXPERIENCE

- Control Systems Intern** July 2025 - Aug. 2025
Allan Fyfe Equipment Ltd *Concord, ON*
- Introduced and developed **3D CAD models** of aerial lift trucks, proactively applied design skills to create detailed **mechanical drawings** that supported the production line
 - Collaborated with electrical and mechanical teams, **wiring Arduino microcontrollers** to devices including post-takeoff mechanisms for boom lifts and custom platforms on Freightliner trucks
- Royal Canadian Air Cadet** Sept. 2019 - June 2025
351 Silver Star Squadron *Markham, ON*
- Served as one of four Senior Warrant Officers, the highest-ranking positions with extensive responsibilities, providing leadership and guidance to **over 300 junior cadets** aged 12 to 18
 - Oversaw the **admin and IT sector** with direct report from **ten cadets**, while regularly communicating with the Supporting Officer for guidance and approvals
- Design Co Head - First Robotics Competition** Sept. 2021 - June 2025
8884 Knight Owls *Toronto, ON*
- Led a team of **15 members** to model and simulate an competitive robot using Computer Aided Design softwares including **Onshape and Fusion 360**, with a focus on efficiency, reliability and innovation
 - Trained and supervised **20 peers** in the safe use of **3D printers, CNC machines, and laser cutters**
- Private and Glider Pilot** June 2023 - Aug. 2024
Gander Flight Training *Gander, NL*
- Selected as **one of 60 cadets (out of 1,000)** to represent the Air Cadet program at the national summer courses, earning both Glider and Private Pilot licenses through the Air Cadet Pilot Scholarship Program
 - Logged 50+ hours** of flight time in a **Cessna 152**, including **12 hours solo**, and **completed 200+ hours** of ground school, which prompted the development of decision making, situational awareness, and **fast-paced learning**

EDUCATION

- University of Waterloo** Sept. 2025 - June 2030
BASc, Systems Design Engineering *Waterloo, ON*