

Isaac Man

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EDUCATION

University of Waterloo

BASc, Systems Design Engineering

Sept. 2025 - June 2030

Waterloo, ON

EXPERIENCE

Control Systems Intern

Allan Fyfe Equipment Ltd

July 2025 - Aug. 2025

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
- Experimented with PCB design software such as **Kicad** to develop custom PCB's for boom trucks

Royal Canadian Air Cadet

351 Silver Star Squadron

Sept. 2019 - June 2025

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

8884 Knight Owls

Sept. 2021 - June 2025

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**
- Won the ONT District Durham College Event** and the **Innovation in Control Award**, qualifying for and placing **9th in the Curie Division** at **FIRST World Champions**

Private and Glider Pilot

Gander Flight Training

June 2023 - Aug. 2024

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**, which prompted the development of decision making and situational awareness under real world conditions
- Completed **200+ hours** of in depth ground school covering **aerodynamics, meteorology, and human factors**

PROJECTS

Nutrition Tracker Website | Firebase, JavaScript, HTML, CSS

Sept. 2025 - Present

- Developed a responsive **web application** to track daily nutrition and calorie intake
- Integrated **Firebase** for user authentication and real-time database storage of nutrition logs
- Incorporated **AI** to generate personalized feedback and meal recommendations based on user data
- Achieved **30%** increase in user engagement through personalized feedback and meal suggestions

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
- Promoted sustainability by **repurposing unused robotics components** and optimizing material efficiency
- 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**

SKILLS, AWARDS

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

Awards: Air Cadet OPC Post Secondary Education Scholarship, Bronze Medalist Skills Ontario Comp. Mechanical CAD