

# OWEN MOOGK

Mechatronics Engineering Student  
at the University of Waterloo

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## EXPERIENCE

### Formula SAE Team – Powertrain Member September 2022 – Present

- Working to design and build a powertrain system for a Formula racecar.
- Designed assembly and manufacturing aids in SolidWorks.
- Fabricated parts using 3-axis milling machine and lathe.

### FIRST Robotics – Subteam Lead August 2018 – September 2022

- Led a subteam of students using project management and teamwork skills to design and build a robotic subsystem.
- Designed flexible assemblies and functioning systems in SolidWorks for manufactured and 3D printed fabrication.
- Fabricated complex parts and assembled self-designed robotic systems.
- Led the sponsorship program, using networking and interpersonal skills to attract and retain sponsorship for the team.

### Electric Car Team – Senior Student September 2021 – June 2022

- Designed and manufactured a fully electric racecar in under a year.
- Designed a 3D printed emergency stopping system in OnShape.
- Optimized drivetrain systems to increase efficiency.
- With the team, achieved first place in all races attended.

### Merry Hill Golf Club – Clubhouse Employee May 2020– September 2022

- Demonstrated excellent customer service by implementing communication, responsibility, and cooperation skills.
- Navigated difficult situations through accountability and professionalism.

### SHAD Canada – UPEI Fellow July 2021

- Networked and learned from global leaders in many different areas.
- Engineered an award-winning solution interfacing Canadians with their water consumption habits.

## EDUCATION

### Mechatronics Engineering – University of Waterloo 2022 – 2027

Candidate for Bachelor of Applied Science, studying Mechatronics Engineering. Working with likeminded students building collaboration, time management, and technical skills. Maintaining a grade average above 95%, with a 4.0 GPA.

## COMMUNITY ACTIVITIES

### FLL Team Mentor

Co-Founded and mentored a FIRST Lego League team, teaching engineering and teamwork skills to students. Built a framework to foster creativity, learning, cooperation, and teach the design process in the context of solving real world problems.

### Choose to Lead

Accepted into the 4-year prestigious Choose to Lead program, where I developed teamwork, cooperation, management, and leadership skills.

## SKILLS

### Software

Python (4 years), JavaScript (4 years), C++ (1 year), Java (1 year)

### Frameworks / Tools

HTML (5 years), CSS/LESS (5 years), ReactJS (3 years), Django (1 year), Git/GitHub (4 years)

### Design

SolidWorks (5 years), AutoCAD (1 year), Onshape (1 year)

### Other

Experience in customer service and leadership roles, carrying a positive attitude while demonstrating teamwork and cooperation.

## ACHIEVEMENTS

### JamHacksV Winner

Won first place in the JamHacksV hackathon, where I designed and built an AI-powered cat feeding robot in 48 hours.

### AP Scholars Award

Awarded the AP scholars Award for exceptional performance on Chemistry, Physics, and Economics advanced placement exams, all of which I achieved a qualifying score.

### Duke of Edinburgh's Award

Awarded the prestigious Bronze and Silver Duke of Edinburgh awards for exceptional community service and personal growth.

### Harvard CS50

Completed the Harvard CS50 computer science course, in which I learned software design principles, C++ and Python, and built a full stack application.

### DECA

Achieved within the top 10% of competitors in the DECA international business competition.