OWEN MOOGK

Mechatronics Engineering Student

at the University of Waterloo

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# SUMMARY

I am an aspiring engineer from Waterloo ON, Canada, passionate about motorsports, robotic systems, web development, and AI. Experienced in building websites with ReactJS and Django, and indulged in robotics, owning a 3D printer and being heavily involved in a FIRST Robotics Team.

# EXPERIENCE

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

* Working to design and build a powertrain system for a Formula racecar.
* Designing assembly and manufacturing aids in SolidWorks.
* Fabricating 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 robotic systems.
* Sponsorship program lead, 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.

## Choose to Lead – Student September 2018 – June 2022

* Developed teamwork, cooperation, management, and leadership skills in a variety of community activities and volunteering efforts.
* Developed public speaking skills, hosting the Waterloo Regional Mayors forum.

# EDUCATION

## Mechatronics Engineering – University of Waterloo 2022 – Present

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. Expected graduation April 2027.

# SKILLS

## Software Development

Proficient in object-oriented programming, with Python (4 years), JavaScript (4 years), C++ (1 year), and Java (1 year).

## Frameworks / Tools

Experienced in website development tools such as HTML (5 years), CSS/LESS (5 years), Javascript (4 years), ReactJS (3 years), Django (1 year), Git/GitHub (4 years).

## Design & Engineering

Experienced using CAD software such as SolidWorks (5 years), AutoCAD (1 year), and Onshape (1 year) for 3D printing and manufacturing.

## Other

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

# ACHIEVEMENTS

## SHAD Canada

Engineered an award-winning solution interfacing Canadians with their water consumption habits, including custom 3D printed pipe mounting.

## JamHacksV Winner

Won first place in the JamHacksV hackathon, where I designed and built a complete 3D printed 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.