OWEN MOOGK

Mechatronics Engineering Student
at the University of Waterloo

226-989-0602
owenmoogk@gmail.com
linkedin.com/in/owenmoogk
owenmoogk.github.io

SKILLS

Software Development: Python (4 years), JavaScript/jQuery (4 years), C++ (2 years), C# (1 year), and Java (1 year).

Frameworks / Tools: MVC/ASP.NET (1 year), ReactJS (3 years), Git (4 years), HTML/CSS/Bootstrap (5 years), Django (1 year).

Design & Engineering: SolidWorks (6 years), AutoCAD (1 year), and Onshape (1 year) for 3D printing and manufacturing.

Other: Experience in customer service and leadership roles, demonstrating teamwork, communication, and cooperation.

EXPERIENCE

Software Developer (Co-op) – BusPlanner Inc. May 2023 – September 2023

- Developed and maintained web applications using the MVC ASP.NET framework, ensuring robust solutions for clients.
- Implemented and improved many web application features, directly affecting hundreds of clients across North America.
- Resolved issues on both the frontend and backend, employing debugging skills to identify and fix bugs, optimize performance, and enhance application usability with tools including C#, JavaScript/jQuery, and Bootstrap.
- Designed SQL database solutions and advanced SQL queries for efficient data retrieval and manipulation.
- Improved codebase structure, refactoring and optimizing existing code to enhance performance, reusability, and scalability.
- Utilized Azure DevOps and TFS version control to manage source code and participate in code reviews among team members.
- Conducted thorough testing of web applications to identify issues, ensuring optimal functionality and user experiences.

Subteam Lead – FIRST Robotics Team 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 robotic systems in SolidWorks for manufactured and 3D printed fabrication.
- Fabricated complex parts and assembled robotic systems, troubleshooting and optimizing mechanical systems.
- Lead the team's sponsorship program, using networking and interpersonal skills to attract and retain sponsorship for the team.

Drivetrain Lead – Electric Racecar Team September 2021 – June 2022

- Designed and manufactured a fully electric racecar in under a year, optimizing drivetrain systems to increase efficiency.
- Developed offboard battery management system, tailoring power use and energy deployment in competition.
- Designed a 3D printed emergency stopping system in OnShape, ensuring safety and ease of use in emergencies.

Personal Projects

- Developed complex full-stack webpages using HTML, CSS, JavaScript, ReactJS and Django (Python).
- Implemented advanced algorithms and data structures to solve a variety of computing problems.
- Built a responsive personal portfolio web app, showcasing many personal projects and endeavours (linked above).

ACHIEVEMENTS

SHAD Canada: Engineered an award-winning solution interfacing Canadians with their water consumption habits.

JamHacksV Hackathon Winner: Won first place, where I designed and built a complete 3D-printed cat feeding robot in 48 hours.

AP Scholars Award: Awarded for exceptional performance on the Chemistry, Physics, and Economics advanced placement exams.

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

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 of 95%, with a 4.0 GPA. Expected graduation April 2027.