

William Wen

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wwen.ca

Education

University of Toronto | B.A.Sc. in Engineering Science + PEY Co-op

September 2021 – April 2026

- Cumulative GPA: **3.76/4.0**, Dean's List all semesters
- Major in Robotics Engineering and minor in Artificial Intelligence Engineering
- *Relevant Coursework*: Operating Systems, Data Structures & Analysis, Digital & Computer Systems, Embedded Systems, Introduction to Artificial Intelligence, Praxis I, II & III (Engineering Design)

York Mills Collegiate Institute | Ontario Secondary School Diploma

September 2018 – June 2021

Experience

Mozilla Corporation

Back-End Software Engineering Intern – Privacy & Anti-tracking Team

May 2024 – Present

- Maintained Firefox's privacy and anti-tracking codebase using **JS** and **C++**
- Implemented UI changes to better inform users of privacy choices and their effects
- Worked to **reduce site breakages** and improve web compatibility of anti-tracking features

Computational Geometry Algorithms Library (CGAL)

Google Summer of Code Developer

May 2023 – September 2023

- Implemented a point set denoising algorithm to improve CGAL's Point Set Processing package using **C++**
- Actively collaborated with mentors to ensure code conformed to developer guidelines
- Used **Doxygen** to generate high quality documentation for CGAL users and developers

Toronto Transit Commission

Signals Engineering Assistant

May 2023 – August 2023

- Created a log playback and decoder tool for the Automatic Train Control system to be used by 15+ engineers using **C++**, **JavaScript**, **HTML** and the **p5.js** library
- Reduced the time required for incident investigations by **over 50%**
- Assisted in commissioning multiple work cars by conducting testing of the onboard signalling systems

University of Toronto; Passeport Lab

Environmental Research Assistant

May 2022 – August 2022

- Accurately quantified thousands of microplastics in stormwater samples
- Automated data entry tasks using **Excel** and **VBA**, decreasing the time required for data entry by **over 70%**
- Developed a new standard operating procedure to manufacture microplastics for spike and recovery tests, able to produce samples **over 100x faster** than the existing method

Clubs & Design Teams

aUToronto

Motion Planning Lead

September 2022 – June 2024

- Led a team of **7 members** to develop the motion planner for our autonomous vehicle using **ROS2** and **C++**
- Optimized runtime performance by using a lattice-based planning approach **to improve worst-case reaction time by 30%** from 140ms to 95ms
- Used **Git/Gitlab** to collaborate across 8 other sub-teams totalling over 100 active members
- Won **1st place overall** out of 10 teams across Canada and the United States at the SAE AutoDrive Challenge II

Blue Sky Solar Racing

Fabrication Team Member

July 2021 – January 2022

- Assisted in the manufacturing process of the carbon fibre aerobody
- Used **CAD tools (CATIA)** to design a support structure for the carbon fibre mould

Skills

Programming Languages: C++, C, Python, Java, Javascript, Bash, MATLAB, System Verilog, Assembly (RISC-V)

Other Technologies: Git, ROS2, CMake, Linux, MS Office Suite, Google Suite, Fusion 360