

ERIC ZHAO

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SKILLS

Languages	C++, Java, Python, HTML, CSS, JavaScript
CAD	Solidworks, AutoCAD, Tinkercad, GrabCAD, Fusion360, GD&T
Other Skills	Arduino, Microsoft Office, Git, Altium, Figma, Adobe Creative Suite

PROJECTS

POLARIS Navigation System

Fusion360, Arduino, Java

Dec 2019 - Jan 2020

- Developed, prototyped functioning laser gyroscopes to measure rotational position of model spacecraft around 3 axes.
- Modelled laser gyroscopes and housing models in Fusion360 which I later built, soldered, and wired with an Arduino UNO.

Circuit Board Mounts

Solidworks, Altium, GrabCAD Workbench

Feb 2020

- Designed new board mounts to secure 9 different PCBs, protecting them from the vibrations of a moving vehicle.
- Researched about heat set inserts, and incorporated their use into the development of the mounting supports.

Conveyor Design Project

Solidworks, Adafruit MakeCode, Microsoft Word

Oct 2020 - Dec 2020

- Led a team of 4 to design and produce a professional report, bill of materials, and CAD model for a fully functional conveyor system which autonomously identifies and sorts packages.
- Used Solidworks to design the frame and Adafruit MakeCode to run simulations of the sorting software.

3D Printable Phone Stand

Solidworks, GrabCAD Print

Nov 2020 - Dec 2020

- Designed a fully collapsible and adjustable cell phone stand, supporting charging and viewing at 8 different angles from 60-76° and both portrait and landscape orientations.
- Utilized GrabCAD Print to minimize the volume of the stand and support material used for 3D printing.

EXPERIENCE

Midnight Sun Solar Car Team

Battery Box and Interiors Team Member

Jan 2021 - Present

- Conducting research into various production methods, including support filament, heat set inserts, and mounting procedures.
- Leading the development of new board mounts for the printed circuit boards of the solar powered car.
- Working on creating and implementing an aesthetically pleasing dash design using panel and mold CAD in Solidworks.
- Improved the electrical port enclosure with a new, fully 3D printable, sliding cover.
- Prepared a fully retractable and compact cup holder within a one-week design sprint.

Relay For Life

Organizer and Content Creator

Feb 2019 - Jun 2020

- Managed an executive committee that organized MGCI Relay For Life, a community fundraiser event for cancer research, which raised over \$14,000 over 2 years.
- Created and managed social media campaigns, engaging 400+ students across Canada.

UWaterloo Baja SAE Team

Chassis and Dynamics Team Member

Feb 2021 - Present

- Conducting research to design and model a roll cage CAD for the newly revived off road vehicle competition team.

WORK EXPERIENCE

Kumon

English and Mathematics Tutor

Aug 2019 - Mar 2020

- Worked with 200+ students from all grade levels to improve their Math and English skills.
- Marked, recorded, and provided detailed feedback for class and homework twice a week.

EDUCATION

University of Waterloo

Candidate for BASc, Mechatronics Engineering

Sep 2020 - Apr 2025

Cumulative GPA: 97.27 (4.0)