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 grades K-12 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)