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 ✏
Dec 2019 - Jan 2020
Fusion360, Arduino, Java
- Developed and 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.

Refocus ✏
Jan 2020
JavaScript, Node.js, HTML, CSS
- Created a full-stack app that serves as a study tool, with a fully responsive website that recognizes facial expressions and vocal commands using APIs.

Goose Escape Game ✏
Nov 2020 - Dec 2020
C++
- Constructed a 2D endless arcade game using BearLibTerminal libraries.
- Developed algorithms to generate fully randomized mazes, special game mechanics such as powerups, and various types of monsters and chase movement.

Conveyor System Design
Oct 2020 - Dec 2020
Solidworks, Microsoft Word, Adafruit MakeCode
- 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.

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.

WORK EXPERIENCE

Kumon
Aug 2019 - Mar 2020
English and Mathematics Tutor
- 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
Sep 2020 - Apr 2025
Candidate for BASc, Mechatronics Engineering
Cumulative GPA: 97.27 (4.0)

AWARDS

First in Class Engineering Scholarship
Feb 2021
Presented to the top student of the class during each term.