y83dai@uwaterloo.ca

YUAN DAI

Mechanical Engineering
Undergraduate

<u>yuan-dai.com</u> www.linkedin.com/in/yuandai

# SUMMARY OF QUALIFICATIONS

- Experienced with AutoCAD and SolidWorks (plotting, modelling, static simulations)
- Proficient in C++ and Python (TensorFlow, NumPy)
- Familiar with HTML, CSS, JavaScript (web development), MATLAB, SQL, and VBA
- Skilled with Microsoft Word, PowerPoint and Excel (Macros, Functions, PivotTables)
- Familiar with engineering drawings and GD&T
- Experienced with machining, including the mill, lathe, laser cutter, and 3D printer

#### **EXPERIENCE**

# Jan 2021 - Junior Energy Analyst

## Rushby Energy Solutions Inc.

Apr 2021

- Pitched idea and developed a web tool that creates energy benchmark reports for public buildings based on 2 million data points. The tool is hosted at <u>psebtool.ca</u>
- Performed on-site lighting audits for 20 university buildings outlining recommendations and potential savings
- Performed regression analysis for energy consumption models in RETScreen and Excel
- Evaluated clients' building performance and created professional reports in Word
- Nominated for the UW Co-op Student of the Year award

# May 2020 - Online Skills Development Assistant

## University of Waterloo

Aug 2020

- Liaised between professors and the Student Association to create educational modules for engineering students
- Connected with advisors and co-hosted info events outlining University resources
- Worked with Mech. Eng. professors to enhance first-year course content
- Led in a team to develop plans to improve waste management on campus

#### Jul 2015 -

#### Lead Summer Camp Counsellor

## Cybercamp Robotics Academy

Aug 2018

- Gave 20 40 minute daily lessons on LEGO robot design and ROBOTC to 30 campers
- Designed and organized activities ranging from robotics competitions to games

## **PROJECTS**

## 2019 - Present Midnight Sun Mechanical Designer

- Designed and manufactured autobody components of a solar-electric car
- Reduced door mold cost by 28% through SolidWorks analysis
- Supervised the production of the body and liaised between various sub-teams to ensure manufacturing accuracy and correct timeframe
- Provided SolidWorks and engineering drawing training for new members

## 2017 - 2019 Charger Sleeve

- Designed an arm sleeve that can charge various devices using body heat
- Collected data using Arduino sensors and performed analysis in Excel
- Presented to experts and received the silver award in the Toronto Science Fair

## **EDUCATION**

2019 – Present

Candidate for B.A.Sc. Mechanical Engineering

University of Waterloo

## **INTERESTS**

- Programming proactive learner, developed many small projects using various languages
- Team sports played 3 years of AA volleyball and basketball, active in intramural sports
- Chess 2000 ELO rating, 99<sup>th</sup> percentile on chess.com and member of the Chess Club