YUAN DAI

Undergraduate
Mechanical Engineer

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SUMMARY OF QUALIFICATIONS

- Experienced with **AutoCAD** and **SolidWorks** (modelling, assembly, simulation, etc.)
- Proficient in **C++**, **Java** and **Python** (data organization, basic machine learning)
- Familiar with **HTML**, **CSS** (web development), **SQL** and **MATLAB**
- Skilled with **Microsoft Word** and **Excel** (functions, macros, solver, etc.)
- Familiar with **engineering drawings** and **GD&T**
- Experienced with **soldering** and **machining**, including **mill**, **lathe**, **laser cutting**, **3D printing**

EXPERIENCE

2020   **Online Skills Development Assistant**   *University of Waterloo*

- Led a team to create educational resources on key engineering skills
- Worked with Intro to Mech. Eng. Professor to enhance course content and layout
- Connected with clients and students to refine and improve
- Developed plans to reduce campus textile waste and presented to various clients

2019   **Park Manager/Ride Attendant**   *Centreville Amusement Park*

- Awarded Rookie of the Year for outstanding problem solving and communication
- Worked with Security, Health & Safety facilities to ensure smooth operation

2015-2018   **Lead Summer Camp Counsellor**   *Cybercamp Robotics Academy*

- Supervised 40 campers ages 12 - 14
- Gave 20 - 40 minute daily lessons on robot design logistics and ROBOTC
- Designed activities ranging from robotics competitions to outdoor games

PROJECTS

2019-present   **Midnight Sun Aeromolds Sub-Team Lead**

- Dedicates 6-12 hours weekly to organize meetings and work sessions
- Reduced door mold material cost by 28% using SolidWorks design analysis
- Created molds and car body with carbon fiber and honeycomb sandwich panels
- Provided mold creation and engineering drawing training for new members

2019   **Toy Design**

- Modelled and created a customizable music box with 60+ parts
- Received excellent feedback from a Spin Master Agent

2016-2019   **Toronto Science Fair**

- Designed an arm sleeve that charges smartphones using body heat
- Incorporated various components to limit USB energy output
- Programmed Arduino sensors to obtain data and manipulated them in excel

2019   **Engineers Without Borders**

- Led a team of 5 students to install a new stop sign, and pitched ideas for new garbage can designs and plans to improve green spaces to the municipal

EDUCATION

2019-Present   Candidate for BASc. Mechanical Engineering   *University of Waterloo*

INTERESTS

- **Team sports** – 3 years of AA volleyball and basketball, developed leadership and teamwork skills
- **Chess** – 2000+ ELO rating, 99th percentile on chess.com and member of the Chess Club
- **Programming** – proactive learner, developed many small projects as a hobby