

James Chen



(613) 600-9672



james.chen2@uwaterloo.ca



www.linkedin.com/in/james23chen/

EDUCATION

University of Waterloo, Waterloo, ON— Candidate For Bachelor of Applied Science, Mechanical Engineering, Honours, Co-operative, Class of 2023

QUALIFICATIONS

- Proficiency in **GD&T**, **AutoCAD** and **SolidWorks** developed through design coursework and projects.
- Knowledge of C++ and C learned through programming courses and RPN calculator project.
- Initiative developed through leading **Arduino** and **F1 in Schools** projects.
- Excellent organizational skills acquired through balancing badminton training, Key Club, and violin practice throughout high school, all while maintaining a high academic standard.
- Communication skills gained through playing and coaching provincial badminton for two years.

PROJECTS

Arduino Rotating Display

October - December 2018

- Designed and implemented automatic magnet rotation device using **Arduino** motor.
- Modelled preliminary drawings of display using **AutoCAD** and **SolidWorks**.
- Constructed prototype of the display using power tools such as a jigsaw and a circular saw.

Arduino RC Car

March - June 2018

- Led group of three to spearhead development of an **Arduino** car with remote-controlled and self-pathing capabilities.
- Designed autopilot feature by implementing an algorithm that processes data from sensors attached to an **Arduino** UNO.
- Applied project management techniques such as weekly **Scrum** meetings to maximize output.

F1 In Schools Design Competition

January - June 2018

- Modeled multiple iterations of a miniature F1 car which was used in competition with **SolidWorks**.
- Used project management to delegate tasks and enforce deadlines in a group of four.
- Collected and analyzed motion data using **Microsoft Excel** in order to pinpoint flaws in the car.

Reverse Polish Notation Calculator

March - April 2018

- Developed calculator in **C++** using classes, linked lists, stack and functions.
- Designed user interface using Allegro graphics library.
- Devised two variations of a "Calculator" class, using stack/linked lists to take in inputs.

EXPERIENCE

Volunteer Coach — Soong Badminton Academy, Ottawa, On

July - August 2018

- Assisted in the development of technical and physical fundamentals of badminton for over 20 children from ages 8 to 10.
- Proficiency in verbal communication gained through explaining drills, giving instructions, etc.
- Developed leadership ability through mediation of conflicts among students.