**Question 1**

**Reasons for choosing your program and Waterloo (\*Required)**

**Please tell us about your educational goals, your interest in your chosen program(s), and your reasons for applying to the University of Waterloo. If you have applied to more than one program please discuss your interest in each program. (900 character limit)**

I chose Waterloo due to it being the best Technology University in Canada and for its amazing co op program. Waterloo provides the largest post secondary co-op program and that has always appealed to me. I am an experiential learner and have always found that I learn the most when I actually deal with the theoretical concepts in real life.

I applied to Mechatronics because I have always loved combining the three fields of electrical,mechanical and software. I love building new things and working on a diverse set of systems.

I applied to computer science because I have always been interested in programming and developing have enjoyed developing software to solve real world issues.

**Question 3**

**Extracurricular Activities - additional information (optional)**

**Provide any additional information about anything in the above table. (600 character limit)**

In April, 2017 I went to the Vex World Championships with my robotics team. I was the programmer on the team and we worked to program the driver control as well as the 15 second autonomous period at the start of the match.In May 2018 I started the 6ix robotics team and we ran it out of my basement competing at tournaments around the province. On this team I programmed, built and drove the robot. In one of our tournaments we won every single match and won every single autonomous mode. This year we won a tournament, went to semifinals 3 times received the Innovate award and 2 design awards.

**Question 1**

**Engineering Interests and Goals (\*Required)**

**Briefly explain why you are interested in engineering and particularly in the program to which you have applied. Comment, for example, on your interests and abilities; your career goals; exposure to engineering through school-related and other experiences; and discussions you have had with engineers, teachers, current or past Waterloo students. (900 character limit)**

I want to become an engineer because my passion has always been to develop something new and see a project go from start to finish. I have always found that it is necessary to be fully involved with every element of a system, when programming a robot it is necessary to understand how all the mechanical systems work or you may cause a motor to run backwards and break the entire system. When building the robot you must understand the electronic limits of the motors or the ranges of the sensors. I find I am skilled and have a passion for all three of the blended skills for Mechatronics. I love programming, working on personal projects and competing in the CCC. I have always enjoyed working with electrical systems especially building a regulated power supply from scratch in TEJ4MR. Finally I have a passion for mechanical, I love designing and building real world systems.

**Question 2**

**More About Your Goals (\*Required)**

**What sorts of things would you like to do or accomplish in Waterloo Engineering and why? (900 character limit)**

In Waterloo engineering I hope to develop the skills .

**Question 3**

**Programming Knowledge**

**If you have applied to Software Engineering you are required to demonstrate that you have experience in developing well-structured, modular programs. However, all applicants should list their programming experience if applicable.**

**For every programming language in which you have at least four months of programming experience, list the language, number of months experience you have in using the language (not how long you have known it), and capacity in which you used the language (e.g., courses completed, work experience, self education). (600 character limit)**

I self-taught myself Java and have used it for 3.5 years building mobile and desktop applications. I used Java to compete in the CCC receiving a score of 34 and I took the AP Comp. Sci exam getting a score of 5/5. I learned C in Grade 10 and have been using it ever since I have used it to program for robotics where I used control loops like PID.C was a part of the ICS4U course building binary trees and using pointers. I self taught myself Python and have used it for ~ 8 months I’ve used it to develop many programs including a self driving car program. I also know the LAMP stack due to ICS3U.

**Additional Information**

**In addition to the specific information requested in all of the AIF questions, please tell us anything else about yourself that you would like us to know when we review your application. Please make sure to complete all sections of the AIF before submitting this page. (900 character limit)**

Link Github