Capstone Assessment

From an academic perspective, this project will allow me to use my development skills to operate a robot. The robot will be able to use sensors to navigate and deliver medicine to a person in need. This project is all about using the skills that I have acquired throughout college to help someone that needs assistance. This project will require both hard and soft skills to create this robot in a timely manner. I will be able to implement my software development skills that I have learned both in college and at co-op to create an optimal robot.

My college experiences will help design this robot tremendously. I will be able to put together all the knowledge I have gathered throughout college and apply it to this one project. Classes like Python programming will allow me to develop the software for the robot. Classes like engineering models will help me to design and build the robot. And classes like software engineering will help me to plan the project. All the classes that I have taken at UC will assist me throughout this project.

My co-op experiences will also be a big help in the design and development of this robot. I have spent all of my co-ops at PCMS. At PCMS I have been a java developer. As a java developer I have learned many crucial skills that will be needed in the development process of our robot. We also plan to use java as our primary language to develop the robot. So, my java skills as well as the day to day planning that goes into a large project will be necessary to the project.

My motivation for this project is a large reason for why we chose to do it. My motivation comes from wanted to help those in need, and also wanting to create a robot. I have had multiple grandparents who were no longer able to move around the house. They needed a family member to get their food, water, and medicine when they needed it. I know that not all people have the luxury of family member or a friend that is always there to take care of them. That is where the motivation for this project comes for. I am also motivated to create a robot. I have always wanted to build and operate a robot since I was younger, and this is the perfect opportunity to do so.

Our preliminary approach to designing a solution will be to break our jobs into three roles. One person creates the robot, one person works on the sensors, and I will develop the software for the robot. Breaking our roles up like this will allow us to all work at the same time without holding another member of the team up. Our expected results will be that the robot is able to go from point A, to point B, to deliver medicine, then return back to point A. We will be able to tell that we have done a good job if the robot is able to complete this task successfully. If the robot is not able to complete this task, then we will know we have more work to do.