Jack Riley

CS 5001

Professor Annexstein

Individual Capstone Assessment

For my senior project, I will be helping to create an RC car that will be fully controllable via a haptic glove. I will work alongside three CS majors and one other CompE major (like me). This means I will be focusing a lot more on the hardware side of this project. I specifically will be focusing on the car itself. I will learn a lot about hardware and communication between platforms during this project. I will also learn a lot about motors and signals as that will be a main focus of my role.

My computer engineering degree and the curriculum I have gone through will help out a lot with this project. The project itself has a heavy focus on both hardware engineering and software engineering, which my major has had a very strong mix of. I have learned a lot about circuitry during my time at UC. I will likely have to create and diagnose circuits throughout this project, so that should come in handy. Also, throughout my time as a student I have had to work with many teams in many different projects. That experience will help me to function well in this group.

My time at Signal X will definitely come in handy during this project. As mentioned before, I expect to do some circuitry work during this project. At Signal X, I gained a lot of experience wiring circuitry and testing it. Both of those skills will be important as I go through the process of modifying the RC car. Secondly, my time at FOX Sports has helped me a lot when it comes to teamwork, specifically when talking about communication with other team members. Communication will be very important throughout this project as a lot of time will be spent by teammates working on separate pieces during the same time.

A lot of my motivation for this project comes from the idea itself. Creating an RC car to be controlled by a haptic glove sounds super fun and is very motivating to me. Secondly, the project is one where I can really tie a lot of my curriculum in together. I have spent a lot of time learning software and a lot of time learning electrical ideas, but not much time experiencing the bridge between. Third, these teammates are friends I have made throughout my time in classes. I look forward to finally having an opportunity to work with all of them.

Currently, my idea for my approach to this project is to start off by researching available RCcars on the market. Assuming I can find one at a decent price, has some indication of radio communication already, strong suspension, and a lot of space to work with then I will purchase multiple and begin to work with them. The end goal would be to have one of these cars modified to fit our project’s requirements. The car would be able to receive and respond very quickly to the actions of the haptic glove. The car would be able to operate through rough terrain, and be very quiet. If the car meets these goals, then I will be very pleased with my work on this project.