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Senior Design

Prof. Santacroce

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Team Evaluation

Jean, Carl, Lucas and I worked well on our project throughout both semesters of senior design. Aside from the frustration at not being able to figure out why the sensor we initially chose wouldn’t work, Jean and I worked well on trying to figure out how to connect the sensors and servo to the Arduino. Carl really shined when we needed the final odds and ends as we approached the final days of the class. Lucas helped a lot in brainstorming new ideas in the beginning of the class and writing accompanying documents.

Jean Atehortua

Design Experiments: 4 – Jean came up with the great idea to print out a protractor to figure out how accurate the gyroscopes measurements were. It wasn’t a perfect test, but it was good enough for us to see that the gyroscope was reasonably accurate after being zeroed in.

Conduct Experiments: 3 – Jean not only came up with the experiment mentioned above, but he also conducted it as well. The way the test could have been done could have been better, but we did what we could on short notice.

Analysis and Interpretation: 3 – Jean was responsible for the data that we gathered from my dad and was able to use that data to try to come to some conclusion about how we should handle the behavior of the servo.

Collaboration: 4 – Jean was fantastic about working with the group and striving toward the common goal. When we got hung up the sensor Jean broke off with me to try and figure out why that sensor wasn’t working. When we needed a solution to figure out the position of the hand instead of the change in position of the hand Jean was able to get us a solution faster than we expected.

Duties and Responsibilities: 3 – I can only think of one instance where Jean could have been more helpful, but I think he had some kind of test or some other potentially legitimate reason for not being super involved in the business plan assignment, so I can’t be that mad at him.

Carl Malcolm

Design Experiments: 4 – Carl did most of the design of the more mechanical and electrical aspects of the project. He worked on finding different ways of placing the components on the glove.

Conduct Experiments: 3 – Carl attempted many different tests for configuring the devices on the glove and he also had some ideas for how we could improve our circuits.

Analysis and Interpretation: 3 – Carl double checked my circuit design and corrected all the mistakes I made a made some valuable revisions.

Collaboration: 4 – Carl proved to be very valuable and goal oriented. He seemed to be very focused on getting the task at hand done and was ready and willing to help when asked.

Duties and Responsibilities: He was mostly put in charge the initial circuit design and mounting procedure. He put in a lot of work outside of class to make the project turn out as well as it did.

Lucas Grevers

Design Experiments: 2 – Lucas may not have contributed much in the way of experiments be he did have some unique and creative ideas for the how the project should be done in the early stages.

Conduct Experiments: 2 – Lucas helped where he could in conducting experiments.

Analysis and Interpretation: 2 – Lucas tried help Jean in interpreting the data gathered from the tests on my dad.

Collaboration: 2 – Lucas helped where he could, but he would occasionally get stuck on an idea or a certain way of implementing something that the rest of the group didn’t think was possible.

Duties and Responsibilities: 3 – Lucas helped a lot on the paperwork. He managed to write a lot of useful information that was needed for the business report.

Sean Copp

Design Experiments: 4 – I came up with many experimental ideas throughout the course of the project. One such idea was to switch to a DC motor because I read somewhere that it may have been able to potentially fix a problem we were having. I quickly gathered the materials and setup up the experiment, and once I realized it failed I put all my attention back on the main project.

Conduct Experiments: 4 – Toward the beginning of the initial design phase of the project I setup many tests to try to figure out why the sensors we were using weren’t working. For example, when the first sensor we used wasn’t working, I broke out the old multimeter and started probing everything to make sure that neither the Arduino or the sensor was dead.

Analysis and Interpretation: 3 – While I didn’t do much to help with interpreting the data from my dad, I did have to interpret our initial findings to prove the gyroscope and accelerometer were working.

Collaboration: 4 – I helped wherever I could throughout the project if something needed to be held while soldering I held it. If we needed to solder something I brought my soldering kit. If there was a document to write I tried my best to write as much quality information as possible.

Duties and Responsibilities: 4 – My duty was initially to work the code and to make sure that the sensors and servo worked with the Arduino and with each other. After the sensors were working, Jean had the best working copy of the code so he took over that role, and then I mostly just tried to come up with better solutions for making the response time on the servo better.