Team Name: sdmay21-40
Team Members: Abdalla Abdelrahman, Daniel Nikolic, Benjamin Schneider, Noah Thompson, Mason Walls, Cole Weitzel
Report Period: Oct 12-Oct 18

Summary of Progress in this Period

During this shortened one week period, we continued work on the second revision of our Design Document. Work on V2 will continue on through the first half of the next period. Modelling of the simulation continued to be expanded this week on the controller and geometry ends. A CAD model of the servo used in the CyBot platform was found which will be used to increase the accuracy of the geometric model as well as the separation distance computing algorithm. With this data, we can accurately calculate the distance between the LiDAR sensor head and the axis that the sensor assembly rotates around, as well as the position of the axis on the robot body. This is necessary in order to determine the position of the follower body relative to the target that it follows.
Our normal weekly team and advisor meetings were held as normal to update all group members on our progress. Lastly, individual group members completed the Entrepreneurship Talk Awareness assignment from the previous week's lecture.

Pending Issues

As our LiDAR sensor is not pre-made in WeBots, we will have to construct this node from scratch. This will pick up once our model of the added acrylic plates, circuit boards, and sensor head servo are fully finished.

Plans for Upcoming Reporting Period

For the next period, our Design Document V2 will be completed. We will also be completing the Technical Challenges Lightning Talk. In this talk, we will address a major technical challenge that we've come across this semester and that challenge's resolution. Lastly, our WeBots model will continue to be enhanced in geometry and controller development. We plan to finish the geometric and physics model by the end of the next period, with all necessary components of the added CyBot acrylic plates and circuitry being modelled. Some simplification in the complex geometry of the acrylic plates may be needed. Individually, members will be completing the Signal Acquisition, Dealing with Noise, and Intellectual Property Talk Awareness assignments. Lastly, our regular weekly meetings will be held as usual.