Anne Baldwin

Senior Design Self-Assessment

For my senior design project (the echolocation robot), I researched what materials and programming skills were needed, purchased all materials, sited all sources, and gave my partner the references she needed to begin coding. I then built the robot and got it working by combining motors, wheels, motor drivers, a circuit board, LEDs, and a battery pack. This took many hours of wiring and rewiring until everything worked correctly and all parts were powered. I completed the working robot by applying and building upon the skills identified in my initial assessment last fall.

I learned to wire both the circuit board and the battery pack to the motor drivers and motors so that they would have a source of power and the input from the program. I also learned how to use c++ with the Arduino IDE. My successes were completing the hardware and the obstacles were trying to finish the code and gather all the data by the time of the expo, but I was able to test the robot and gather the data needed by the deadline.

My group accomplished the task of successfully building a functioning robot instructed by the Arduino code that was developed. We created the expo poster successfully as well and collaborated on team meetings, assignments, and keeping our advisor updated on the progress we made. The aspect of teamwork that were successful were communication and work ethic. We both put in an equal amount of work and made sure to keep each other updated with what parts of the project we were working on individually.

The aspects of teamwork that were not as successful were the testing phase of the project. Since I oversaw the hardware aspect of the project, it was very hard for us to collaborate on the testing of the code since I was the only one who had access to the robot to test it. I believe that the efforts from both my teammate and I were equally distributed amongst the tasks we had to complete. I mostly worked on the hardware and testing the code, recording the data, and calculating thresholds while she mostly worked on the development of the code and writing the functions.