**TEAM 2 - WEEK 8 REPORT - MARCH 13th - 408i SPRING 2022**

**Michael Delatte**

This week Michael and Erik found that there was a better color to detect the lines. The white tape that is currently being used, must not be reflecting the type of light that is best picked up by the robot’s light sensors. This causes the white values to be between 450-700 and the black to be between 720-800. Note that these are the normal ranges, and just a slight error in the white recognition it causes our robot to not function correctly. We have since bought green neon tape which was the best reflector we found by testing different colors.

**Wesley Catbagan**

This week Wesley was unable to attend the lab due to issues with his car. However, he made sure to work on his portion of the project at home throughout the week. As of right now his map code seems to be working fairly accurately and is ready for testing with Erik’s motor control. Through his tests, at home the map has been accurate when making turns and following a set path. During lab this week Wesley hopes to work with Erik to combine the two separate files into one file and work to test the maze with the motor control. The process may be a little tricky, but after this it should be fairly smooth sailing with the map and motor control parts of the project.

**Erik Bryson**

This week we pretty much have motor control and environment perception implemented. Now it is simply a matter of figuring out the brains of mapping and decision making. In the mean time I intend to polish and further bulletproof the motor control and environment perception while the rest of my team develops on the working code we will have this tuesday. Oh I also plan to start on the final report, which I was really looking forward to as a tutorial, but given this is the last class with this project it might have less passion in it now.

Side experimentation revealed that different colors give high contrast against the gray mats. We did notice that reflective tape did best, creating 90% more difference in contrast with the mat. This makes for stronger environmental perception but does very little for line tracking, which works well either way.

Lastly, a blessing in disguise was the frying of my light bark after removing the track ball to show a similar 90% improvement of contrast in detecting against the gray mat, but then I touched the bottom to the shiny metallic tape. Soooo I got my new light bar, which Khoa and Levi did right away from me, soldered on the bottom of the mouse putting it right where I wanted it, which would not have happened if I had not fired it. I wrote a full report on all of this which was well received and led to new protocols for the course.

I love this class, wish I could further learn and perfect the performance of the mouses control and perception incrementally for years.