

Week 13

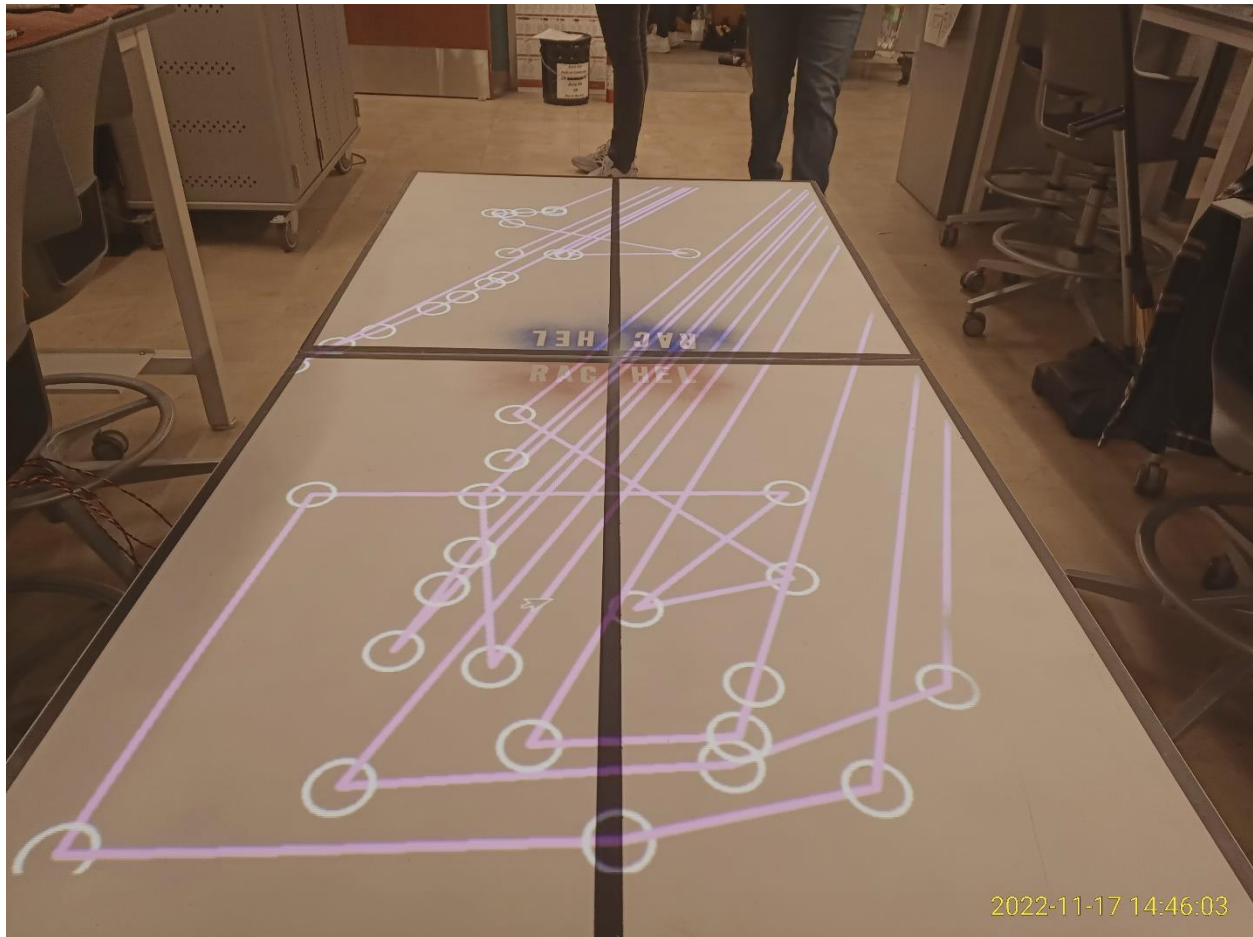
Hours: 6

This week was fairly slow due to a combination of other course work and there not being much left to do on our project. The first thing I did was help Bartosz scrape up the tape which we had placed on the floor some weeks ago. This was a very slow process because the weeks of people walking and rolling chairs on the tape had stuck it very firmly to the floor. It became necessary to use acetone and a scraper to lift the residue and some still remains on the floor. Below is a photo taken mid-process.



Also this week, I used some of Jack's projector code to make a simple demo that draws a circle at each bounce location, and a line between each bounce and the previous bounce. Below is a photo taken after a few bounces. One can see that many of the lines emanate from off the table, that is because when the laptop receives a bounce detection from our microcontroller while the ball is out of view, the estimated ball position is set to  $[-1, -1]$ . Our color filtering parameters aren't quite tuned for

the lighting in the lab, and during this test the automatic whitebalance and exposure controls were mistakenly left on.



The plan for the next week is to implement a hexagonal grid and a lighting calibration program to help configure the filtering parameters for each ball color and new lighting conditions.