

To: Dr. Dean

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We are currently in the “image processing code” portion of our timeline. We are still working on which method of tracking to use, but we have narrowed it down to two options. Color tracking using RGB values seems to be the best option right now, followed by logo tracking with the Auburn logo. Using footage of swimmers wearing a pink swim cap, we can specify a range of pink RGB values in the frame and isolate these colors. The program looks for contours of the pink RGB values, places a dot on a cluster of them and draws a circle whose radius is proportional to the size of the cluster. It works well right now on the test video footage and using a webcam. As far as the Auburn logo tracking we are still working on strengthening the classifier to track the logo. We were able to get it to find the Auburn logo using pictures of the Auburn logo on a phone, however, it is inconsistent at tracking it while the logo is moving. We are still waiting to hear back from Wendy about getting an Auburn logo swim cap for us to use to try and test the classifier more accurately. We are also working on the controls aspect of the project. We have an algorithm that is ready to test, however, we need to get the cart set up and running correctly in “manual” mode first. Right now, the algorithm is set to track faces; we are using this temporarily to make sure that it works. After we get this running then we will change out the face tracking for our color or logo tracking.

This past week most of the time was spent working on the image tracking algorithm. We also went to the aquatic center on Wednesday night and captured some footage of people swimming wearing a pink swim cap. On Monday, we set up the cart on a few pieces of track in the senior design room to see if we could get it running. The cart moves fine in one direction but not in the other. We believe this is due to the slipping of the paracord on the wheel. We will need to get the cart running correctly in “manual” mode before we can test our controls algorithm.

We made good progress using color tracking this past week. Our next step is to test the controls with our image tracking. This will give us a better idea on how well the image tracker is working.