Daily Log

Monday December 9

Absent, but went home and annotated a couple hundred datapoints for the training of the YOLO network. I found a program called labelImg that allows me to draw bounding boxes around the silver ball very easily.

Tuesday December 10

Labeled 1000 data points on labelImg. Last week I downloaded a Youtube video and split the video into individual screenshots. This yielded about 9000 datapoints that I am working to annotate. I may not do all 9000 and look for variety of training data instead.

Thursday December 12

Annotated another 500 data points and spent the rest of the class looking into how to implement YOLO. I encountered an error with using OpenCV, and it was determined that the version of YOLO (Darknet) that I was using was only compatible with OpenCV 3.4 and below. As such, I'm considering using either a virtual environment to download older versions of OpenCV, or using a different version of YOLO altogether. Darknet runs around 20 FPS, whereas TinyYOLO runs at around 200. This speedup might prove to be greatly beneficial to my project.

Timeline

Date	Goal	Met
Today minus 2 weeks	Begin working on creating an interface that allows users to control the motors on the computer	Yes, I have a very basic interface set up.
Today minus 1 week	Improve the graphics of the interface	Yes, implemented ttk
Today	Begin annotation and impelentation of the YOLO network	Yes
Today plus 1 week	Get a version of YOLO trained on a custon dataset up and running	
Today plus 2 weeks	Set up the Perplexus with motors and chassis	

Reflection

I learned a bit more about Terminal and the location of various packages this week. When my OpenCV package wasn't correctly located, I digged deeper into where certain things are saved on my computer and learned about how to debug the package mismatch errors. I am also enjoying the addition of machine learning into my project.