Journal Report 12
12/8/19 - 12/15/19
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Daily Log

Monday December 9

Synced with Khushi on her progress and reviewed what she has been looking into with the GPIO motor control code.

Tuesday December 10

Implemented the ttk package into my existing interface code, which yielded better graphics for the buttons. Played around with some of the color schemes and researched additional layout formats that ttk might offer.

Thursday December 12

Transitioned back to the algorithmic portion of my project, and tested existing ball tracking code with the Perplexus. Low detection accuracy, returned back to the Hough Transform code I had from before and started re-integrating that into the HSV masking I am currently using. I am hoping to have two ball detection methods, so if the first fails, hopefully the Hough Transform will be able to find the ball.

Timeline

Date	Goal	Met
Today minus 2 weeks	Wirelessly send signal from computer to the Raspberry Pi	Yes, the remote connection between my laptop and the Pi was successfully established
Today minus 1 week	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	Improve the graphics of the interface	Yes, implemented ttk
Today plus 1 week	Implement the Hough Transform to work with HSV mask	
Today plus 2 weeks	Set up Perplexus with chassis and integrate with code	
Winter Goal	Send signal from Camera to Computer to Raspberry Pi GPIO Pins	

Reflection

Dr. Gabor mentioned the YOLO (You only look once) algorithm for me to look into for ball tracking. This algorithm sounds very promising in terms of effectiveness when the ball is hidden, and is something I hope to look into in the coming week.