Journal Report 10
11/18/19-11/22/19
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Daily Log

Monday November 18

I read through the first pdf on Hough Transformations and Thresholding, but found it hard to understand how it actually works.

Tuesday November 19

I read through the second pdf on Hough Transformations with detecting square-shaped objects, but thought it would be hard to translate the theory to actual code.

Thursday November 21

I decided to make the edge detection better so that all the lines between squares are visible. I applied a grey-scale threshold to the original colored image. Then, I tried to average the image with the original edge detection image, but faced some errors in the program to debug.

Timeline

Date	Goal	Met
Winter Goal	Be able to identify the cube's state in the program given a clear picture from a good angle of a cube	
Today minus 2 weeks	Identify the coordinates of many points in the centers of the squares in the visible edge detected image.	No, it was hard to find coordinates of points in each of the squares just based on the edge detected image. Need to distinguish squares from each other.
Today minus 1 week	Finish implementing Hough Transform or Shape Detection on the edge detected image	Yes, but wasn't sure how to interpret the results.
Today	Finish implementing Hough Transform for Square Detection on the edge detected image, and be able to interpret the results of the output image	No, it was harder to translate the theory from pdf's into into actual code.
Today plus 1 week	Finish implementing Hough Transform for Square Detection on the edge detected image, and be able to interpret the results of the output image	
Today plus 2 weeks	Use this to find the coordinates of many points in each of the squares on the cube.	

Reflection

This week, I tried reading through pdfs walking through the implementation of Hough Transformations. The method made sense, but it seemed hard to translate the theory directly to code. Since I knew I needed to make the edges more clear anyway, I decided to work on that towards the end of this week, and leave the actual code for square-detection for next week.