Journal Report 7 10/14/19-10/27/19 Rishabh Misra Computer Systems Research Lab Period 2, White

Daily Log

Tuesday October 15 (Anchor)

Researched 3D shape detection libraries.

Thursday October 17

Continued researching 3D shape detection libraries.

Found a library on Github, but after looking more into it, it didn't seem to be an adequate library, because it didn't actually do 3D shape detection (it just found 2D shapes grouped together.

Continued researching for 3D shape detection libraries. Due to inability to find a good one till the end of class, decided to end search on 3D shape detection library. I will come back to try and find this if I can find a database that allows for product lookup based on shape.

Monday October 21

Linked together barcode detector, logo detector, and 2D shape detector. Didn't really have time to try it out and test it. .

Tuesday October 22

Started testing combined, linked system, and got certain funky results, because each of my current systems drew on the original image, so at times it got hard to decipher what different things meant.

Began cleaning up combined system to give neater output that's more manageable and easier to use down the line for processing/lookups.

Going to be honest - got a little bored of doing this, so decided to switch over to finding a barcode lookup database.

Thursday October 24

Continued searching for a barcode lookup database.

Comparing different API's and softwares, decided on an API hosted on barcodelookup.com. This API will charge me if I make too many calls, but I don't anticipate this happening in the short run when building my project (it is a consideration for the long-term product, however).

Began implementation of the barcodelookup.com API for barcode search based on what is detected in an image.

Timeline

Date	Goal	Met
10/10/19	Decide on a shape recognition library	Yes; Shape recognition system imple-
	and implement it to be able to per-	mented and basic shape recognition
	form basic shape recognition	on 2D shapes achieved
10/17/19	Perform more advanced shape recog-	Not really; Couldn't find an adequate
	nition (3D shapes) and link logo de-	3D shape detection library for my
	tection, barcode detection, and shape	purposes. I did start linking systems
	detection API's	together, but I'm not completely done
		yet.
10/24/19	Link shape detection library to bar-	Yes/No; Linking of systems is almost
	code/logo system and look into a	done, and I've decided on a barcode
	lookup database/library where all	API I'm going to try to implement
	the inputs can be supplied and the	
	product can be identified	
10/31/19	Finish linking all 3 systems together	
	and finish implementation of barcode	
	lookup API	
11/7/19	Link barcode lookup API with the	
	rest of the system and begin looking	
	into a lookup API for products found	
	through text recognition	

Reflection

These past 2 weeks were mostly slow and steady progress. I decided against spending more time finding a 3D shape detection API, because I thought my time could be better spent doing other things (it was, since I found and began implementing the barcode recognition API as well as almost finished linking the 3 systems). I'm happy with the progress I made on the barcode API, as its search went quite smoothly (at least compared to some of the other API searches I've done haha) and implementation seems to be moving quite nicely (fingers crossed). I do think finding a lookup library based on text is going to be harder, but I'm sure there is a library that I will come across as I'm searching for that sort of functionality later down the line.