Journal Report 2
9/9/19-9/12/19
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Period 1, White

Daily Log

Detail for each day about what you researched, coded, debug, designed, created, etc. Informal style is OK.

Monday September 9

Downloaded a virtual machine (VMworkstation 15) to run opencv on linux using a windows computer. Spent time both at school and at home to connect my computer's image folder to the vm.

Tuesday September 10

Finished my dehazing method with methods from a library called dehaze darkpriorchannel, and added image rescaling and changed brightness contrast to make the image clearer.

Thursday September 12

In photoshop, using cutout tools, I took out parts of the tomato images (specifically the pots) in order to make the edge detection easier and only have the code look at the essential parts of the images.

Timeline

Date	Goal	Met
Today minus 2 weeks	Start research on edge detection	Yes, I've started to look into methods and libraries to use
Today minus 1 weeks	Get a start on the code in any form	Yes, able to start on a method
Today	Finish image processing and start edge detection code	Yes, found a canny edge detection library and started to use it
Today plus 1 week	Finish edge detection on all images gathered	
Today plus 2 weeks	Gather height data from the edge detection and detect growth over all the images collected	

Reflection

Overall, I made a lot of progress this week. I managed to finish the image processing in the code, as well as pre-process my images in photoshop. It took longer than expected to do image processing in both photoshop and in my code, so I decided to make this week's deadline the edge detection itself. Before, the goal was to be able to do data analysis already, but I didn't get as far on the edge detection as I would've liked. Since I was able to get a start on the image processing code using opencv on my linux desktop at home, I decided to use a virtual machine to make it easier for me to set up my code with my laptop. An issue right now seems to be the memory availible to run through all the images, but I think running through the images in segments and making sure nothing else is running at the same time will overcome this.

However, I did get a start on the edge detection, so I think it's still doable for this week. I found a library called edgedetector.cannyedgedetector which will make it pretty easy for me to run edge detection on my processed images. It only takes a few methods to detect edges, as long as the image is clear enough, so I think I will still be able to stay on schedule overall.