Journal Report 15
1/19/20 - 2/02/20
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Daily Log

Tuesday January 21

Found a tutorial for using a custom dataset to train YOLO. Spent the period trying to understand how each of the config files in the tutorial translated to the config file that I am currently using for tinyYOLO.

Thursday January 23

Got the images I trained into a dataset that can be used for the training of tinyYOLO. Began implementing the changes documented in the tutorial, but encountered a number of errors with inconsistent data types.

Wednesday January 29

Split the folder of training data into train.txt and test.txt files, partitioning by 10%. Generated a script to randomly take the files from the folder and write to the training file. Also cleaned out some of the un-annotated images from the folder.

Thursday January 31

Created the trainer.data files, object.names, and downloaded darknet to train on. I got the weight files for darknet 53, and used the tinyYOLO configuration file to train on my custom dataset. My output was a bit weird, some of the iterations returned Class = -nan, but ultimately the loss was still decreasing over time.

Timeline

Date	Goal	Met
Today minus 2 weeks	Improve the graphics of the interface	Yes, implemented ttk
Today minus 1 week	Begin annotation and implementation of the YOLO network	Yes
Today	Get a version of YOLO trained on a custom dataset up and running	Yes, I trained YOLO on the custom dataset
Today plus 1 weeks	Obtain a higher accuracy on YOLO	
Today plus 2 weeks	Test the algorithm on the Perplexus chassis system	

Reflection

Differing configurations in the tutorial and the network that I am using prove to make it difficult for me to train using a custom dataset. I am hoping that the issue will be resolved soon and that there will be accurate results. In week two, I was successfully able to train darknet! With the obtained weights, I had to go through some debugging in order to make the formats work with each other but ultimately I made good progress.