Journal Report 9
11/11/19-11/15/19
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Daily Log

Monday November 11

Worked on fixing some of the issues with the incorrectly annotated data sets from May; was able to manually readjust the values for the object classes for one of them, but the other will need to be fully re-annotated as it currently has four separate and different class files.

Wednesday November 13

Worked on reinstalling darknet on my Linux virtual machine to try and enable usage of my GPU to speed up training, as the current pace of 10 hours per 100 iterations is much slower than anticipated. Ran into issues with installing some of the dependencies required to use the CUDA cores for processing, specifically with the CUDA and cuDNN software. I did additional research and found that virtual machines generally cannot access GPUs for processing purposes, and started researching alternatives for utilizing the GPU.

Friday November 15

Researched dual-booting Linux (specifically Ubuntu) and Windows and worked on trying to implement it, ran into issues with Linux installer not being able to recognize that there was a version of Windows already present on the computer and the install software requiring Ubuntu to be installed on my main drive as opposed to a secondary one, which I was unable to move the OS to due to storage issues. A potential solution I am looking into for this issue is using a separate primary drive with solely Linux installed on it, and swapping between drives when I need to run darknet training and testing.

Timeline

Date	Goal	Met
November 4	Begin modifying GUI to resemble final product	Was not able to meet this goal, may push back as getting the neural net working is higher priority
November 11	Continue and finish training of full neural net, start training of separated sets, fix broken image sets	Fixed part of the broken image sets, was unable to finish training due to GPU issues
November 18	Continue and finish training of full neural net, work on improving accuracy of best neural network, start training of separated sets	
November 25	Modify GUI to resemble final product, enable image detection through GUI, finish fixing image sets	
Winter Goal	Have a GUI program that can take an input of a directory of images and attempt to classify animal objects detected in the images with a minimum accuracy of 75%.	

Reflection

I had a lot of issues this week with trying to setup my training system to get it to train faster. Last week's initial training went much slower than expected, and I really want to be able to train at a much faster rate, both for quickly correcting any potential runtime issues during training, and to generally make the whole project faster. I ended up going through a lot of options and had a variety of issues with all of them, with the main focus being trying to figure out a way to get a version of darknet running on my computer with access to the processing power of the GPU. I intend to look more into dual-booting as I progress more through project work, and potentially switch to it once I work out the issues with it. For the upcoming week I will most likely simply install Linux on a separate drive and swap it into my computer, and hopefully be able to compile darknet with access to the GPU and the ability to use it in training.