Journal Report 9

10/28/19-11/7/19

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Period 4, White

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**Daily Logs**

**Monday, October 28:**

I researched installing POSIX Threads, which is where I believe the darknet source code will come from in my CMake project. Unfortunately, this does not have a direct Windows version and would need to be installed through a third-party package.

**Tuesday, October 29:**

I worked on installing third-party software that implements POSIX Threads and adding it to my CMake project, but I couldn’t link any of them to darknet and had trouble determining which versions would have what I needed.

**Thursday, October 31:**

Today, I spent the beginning of class watching peer presentations and then giving my own presentation. I then continued looking into adding the third-party software to install POSIX Threads.

**Wednesday, November 6:**

Today, you helped me install darknet on one of the Syslab Linux computers, which means I don’t need to install as many dependencies to be able to run YOLO and darknet. I successfully ran YOLO on one of the test images on the YOLO website and learned the basic YOLO commands.

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**Thursday, November 7:**

I transferred all of the configuration files and image annotations from my personal laptop to the Syslab computer and moved them into the correct directories within the darknet folder, so now I have all the files I need to be able to use YOLO to identify a custom object. I also successfully created the final configuration file, which could only be created after darknet was installed.

**Timeline:**

|  |  |  |
| --- | --- | --- |
| Week | Goal | Met? |
| 10/15-10/17 | 1.Get CMake to properly configure files  2.Begin installing YOLO dependencies in CMake | Yes |
| 10/21-10/25 | Continue installing YOLO dependencies and darknet in CMake | Yes |
| 10/28-10/31 | Finish installing YOLO dependencies and darknet in CMake | No longer necessary |
| 11/6-11/7 | 1.Install darknet on a Syslab Linux computer and successfully run a premade YOLO test program  2.Move all the images and configuration files from my personal computer to the Syslab computer so I have all the necessary files for training YOLO | Yes |
| 11/11-11/14 | Successfully run the training program for YOLO, which may require using a GPU or finding a substitute | No |
| 11/18-11/21 | Get the training program to correctly identify handicap parking passes more than half of the time and work on increasing my program’s accuracy | No |

**Reflection:**

During the first week in this journal entry, I gave a presentation on my project proposal. Through creating my presentation, receiving personal feedback, and watching the other presentations, I learned how to accurately and succinctly convey my research using slides that clearly list the proposal and a brief but persuasive summary of the motivation.

In the second week in this journal entry, I was able to officially begin running YOLO after switching to a Syslab Linux computer and installing darknet there. Ironically, the darknet folder I installed from the YOLO website already contains all the dependencies I had to install on my Windows laptop, including a “3rdparty” folder that contains pthreads and a “cmake” folder.

I started transferring the necessary configuration files and image notations from my laptop to the Syslab computer, and now I have most of the files I need to begin training my program. The only potential part missing is a GPU. The article I am reading to learn how to train YOLO to identify a custom image used a GPU they attached to darknet by installing CUDA, but the YOLO website says this is an optional step. I don’t think I need to install CUDA and use a GPU to train YOLO, but not doing this means I need to set up my training program in a different way than the tutorial article.