**Friday, August 30:**

1. Reviewed project notes from last year.
2. Researched all types of handicap parking passes and found a list on the DMV website. 6 types exist, although 4 are very similar and differ primarily by color (which makes it a good idea to consider making all the photos monochrome)
3. Began collecting photos for the training set for handicap parking passes that hang in car windshields. Collected approximately 25 photos.

**Tuesday, September 3:**

1. Met with Mr. White to discuss project concerns, long-term plans, and my 2-3 week goal of collecting photos for the training set for handicap parking passes that hang in car windshields, possibly preprocessing them to be binarized, drawing bounding boxes around them, and looking into how to create a program to use the training set to identify a handicap parking pass
2. Added approximately 35 more photos to the training set for a total of 57. Some photos are portraits of the handicap parking passes, and others are photos of the handicap parking passes in car windshields
3. Made sure all photos were saved as jpg so they are compatible with the BBox Label Tool. Converted the file type of some photos and replaced others.

**Thursday, September 5:**

1. Researched how to draw bounding boxes around photos. Found an article from someone who successfully used the BBox Label Tool to draw bounding boxes
2. Installed the BBox Label tool
3. Installed 5 necessary dependencies for YOLO (CUDA, CMake, cuDNN, OpenCV, Virtual Studio) on my personal computer to make sure it would work, because I couldn’t download them on the FCPS laptop.

Timeline:

|  |  |  |
| --- | --- | --- |
| Week | Goal | Met? |
| 9/3-9/5 | 1. Research types of handicap parking passes  2. Create a training set for handicap parking passes in that hang in car windshields  3.Figure out how to use the BBox Label tool to draw bounding boxes | Yes |
| 9/9-9/13 | 1.Use OpenCV to pre-process all images so they are monochrome  2.Use the BBox Label Tool to draw bounding boxes around the handicap parking passes in each photo in the training set. | Installed 5 YOLO dependencies |
| 9/16-9/19 | 1.Watch tutorial videos on training a program to detect a custom object in YOLO  2. Begin writing the training program | No |

Reflection:

This week, I collected 57 strong photos of handicap parking passes that hang in windshields to use as a training set. I researched the types of handicap parking passes and found that many types are similar and differ primarily by color. Mr. White suggested binarizing the photos or making them monochrome to avoid creating training sets for each possible color of the handicap parking pass. I was able to successfully install the BBox Label Tool and read about how to use it, so next week I will hopefully be able to use it to draw bounding boxes around my training set photos. Unfortunately, I found out that I can’t download Pycharm or some YOLO dependencies on my FCPS laptop, so I decided to switch to my personal laptop for this project. Overall, I am on track for the 2-3 week goal we discussed of creating a training set with bounding boxes and beginning to create the training program in YOLO.