Our Machine Learning algorithm is able to receive Google Street images, and return the processed results, from a user with a TCP connection through Socket Programming in the Python language.

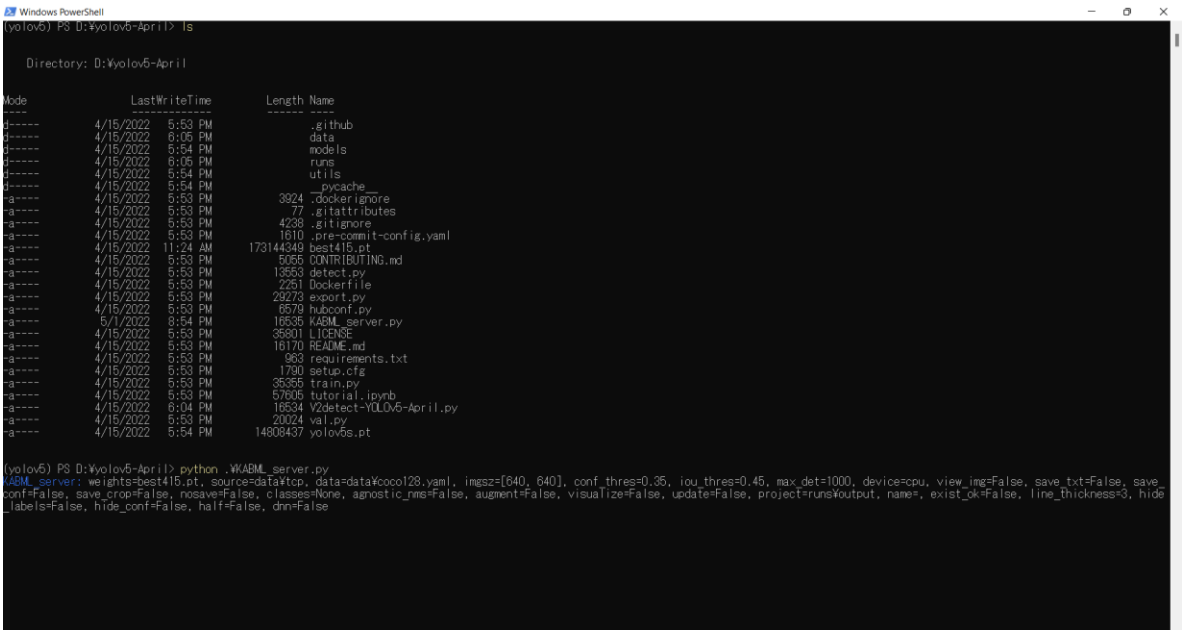
The Client side of this TCP connection would be the user/KAB Web App team, and the Server side would be the Machine Learning algorithm itself.

(Be sure that the IP address used for the TCP connection is correct/references the same address on both sides.)

To start off, you need to have the Server side running first. To do so, run this command in your Command Prompt/Terminal, while in the directory of the Server code:

- **python KABML_server.py**

You should see this:



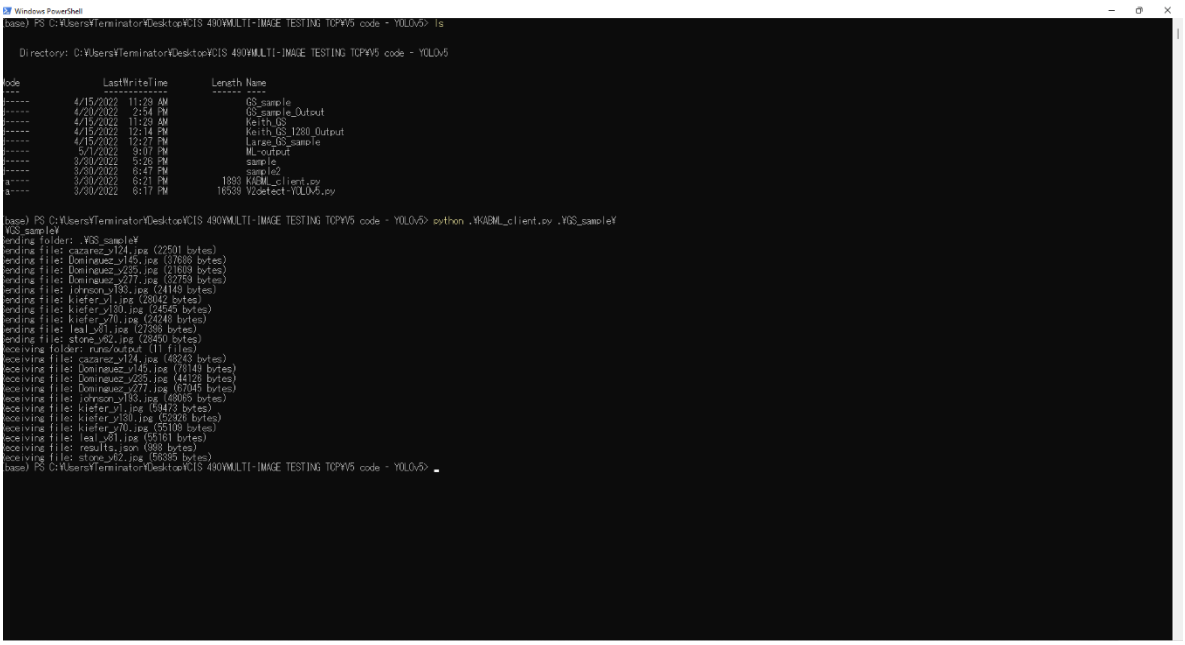
At this point, the Server side is up and running, and waiting for the Client to connect and send Google Street images.

Now you can run the Client side. To do so, run this command in your Command Prompt/Terminal, while in the directory of the Client code:

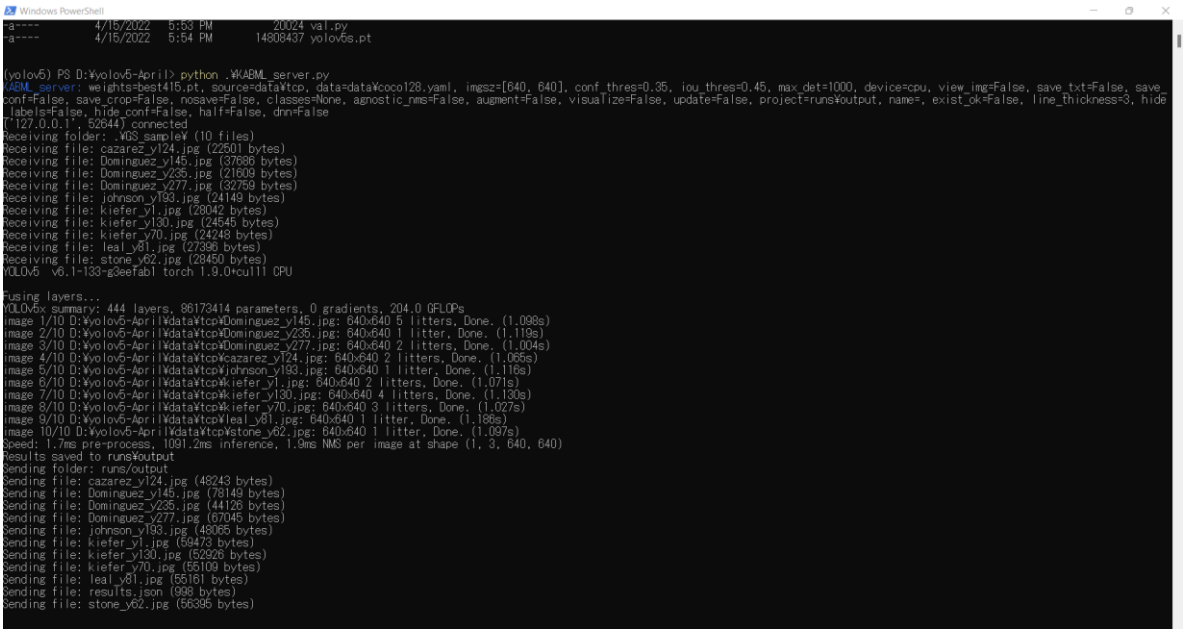
- **python KABML_client.py *folder_name***

The ***folder_name*** should be the name of the folder that holds your Google Street images.

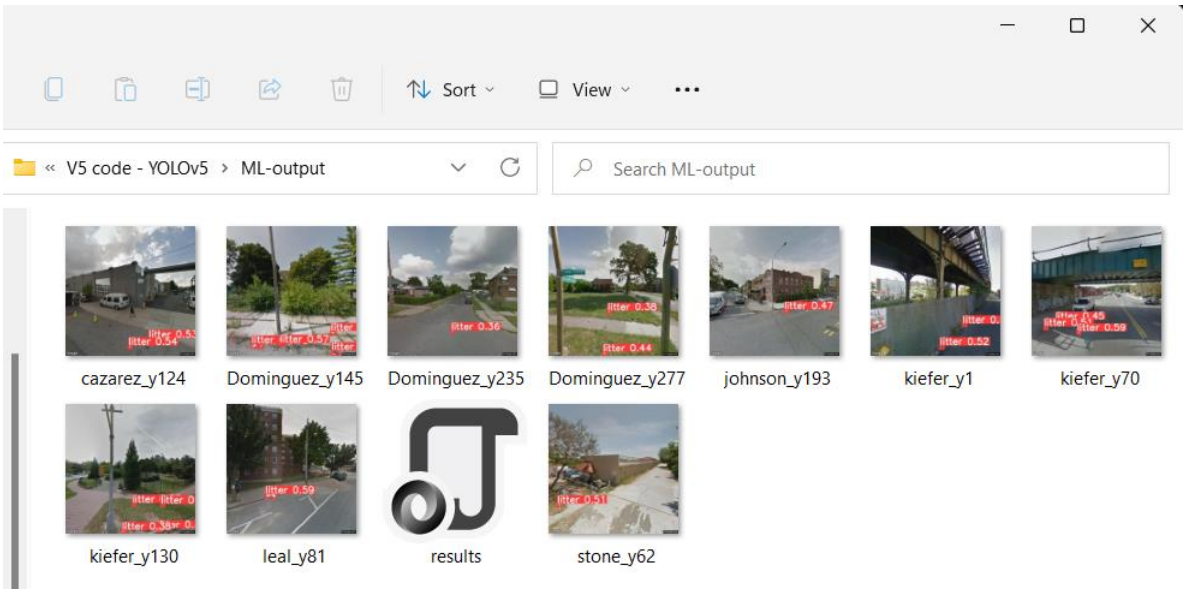
Once you run the Client command, you should see this on the Client side:



And see this on the Server side:

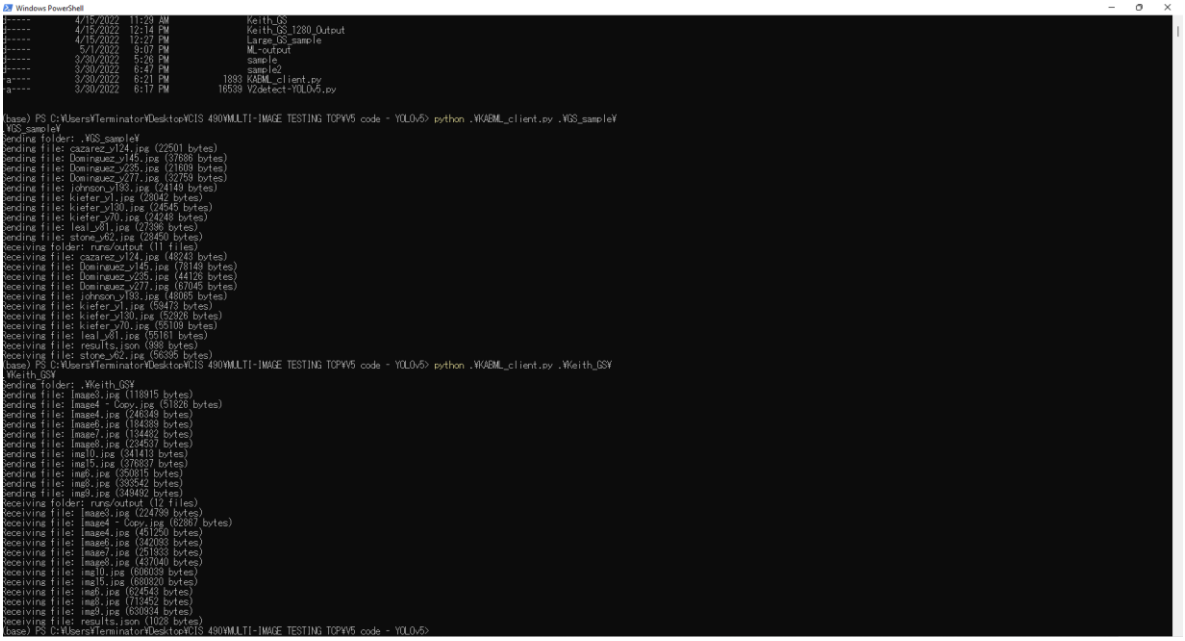


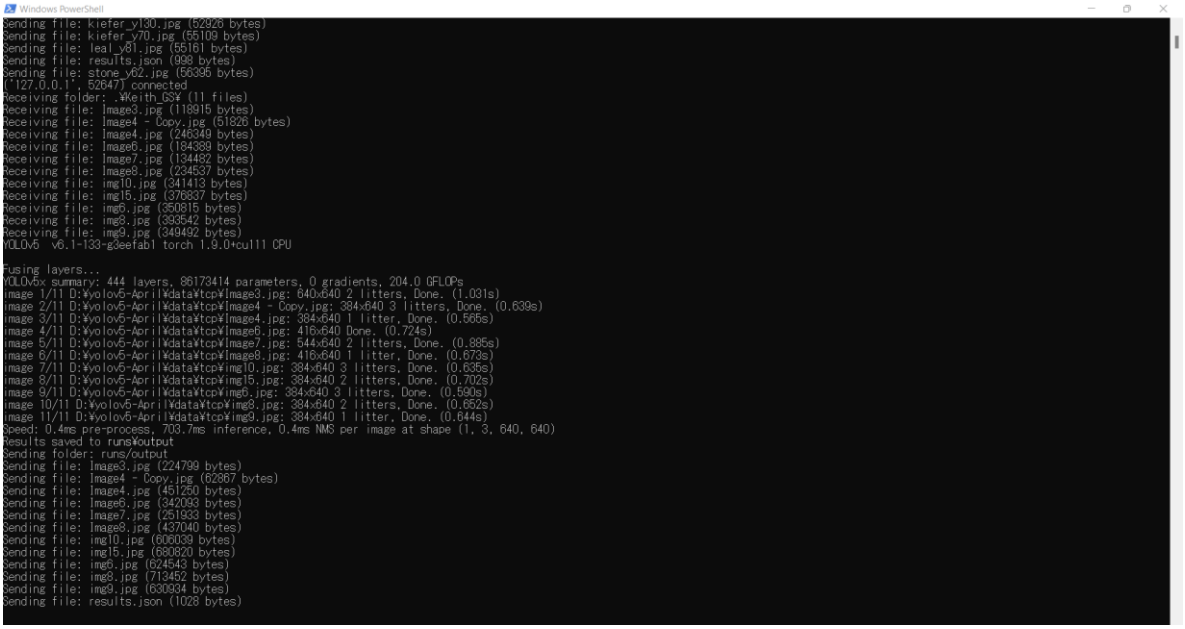
As you can see, all the images from the ***folder_name*** have been sent over to the Server side. Once the Server side has received all the images, it starts processing through them all, one at a time, to detect any instances of litter in the Google Street images. Once it is done going through all the images, it sends the results back to the Client, in which the Client side will save the results into a folder called **ML-output**.



At this point the Client side has finished its purpose. However, the Server side will continue running until the Server code's process is terminated. *(Pressing Ctrl-C)*

Until the Server code's process is terminated, the Server side will be ready for any new runs on the Client side. *(Repeat the same steps from the Client side.)*





Due note though that for every new run on the Client side, the **ML-output** folder's contents will be replaced with the current run's Litter Detection results. If you wish to change this, feel free. However, be mindful of what changes you implement, and how they may affect the TCP connection between the Client and Server.