CS2300 Self-driving, Running the Simulator Winter 2020

The simulator acts as a server where your program can connect to and receive a stream of image frames from. You will need to set up your environment on your laptop to support this.

Open an Anaconda Prompt and navigate to the directory that has the self-driving-car python files (drive.py)

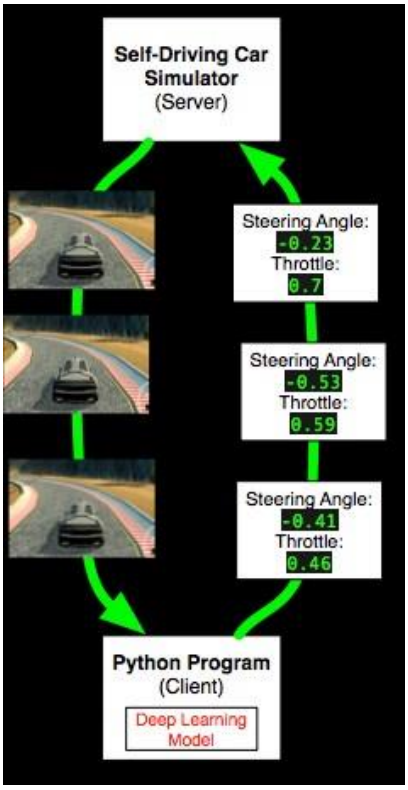
```
pip install python-socketio

pip install eventlet

pip install keras

pip install tensorflow

pip install opencv-python
```



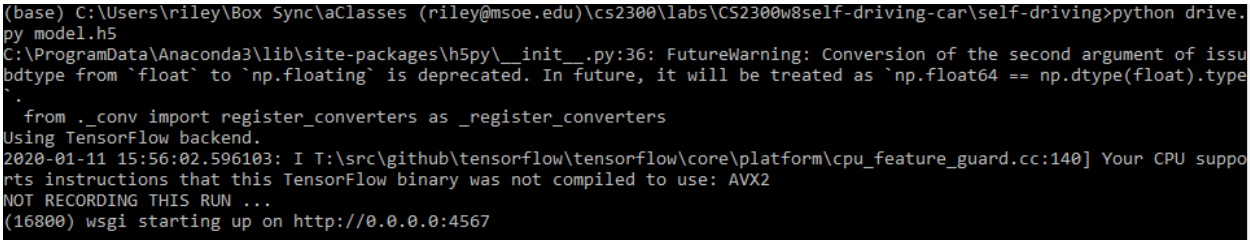
The drive.py Python program will use the exported machine learning model to process the road images to predict the best driving instructions and send them back to the server (the game).

Each driving instruction contains a steering angle and an acceleration throttle, which changes the car's direction and the speed (via acceleration). As this happens, your program will receive new image frames at real time.

Make sure the model.h5 file exists (otherwise, train a new model), then execute:

```
python drive.py model.h5
```

This should show an output like this:



You can then run the simulator in “Autonomous Mode,” and when you do this, the vehicle should drive and the console will be outputting the output (inference) of the model.

If you want to test another trained model, you will need to kill the python process (ctrl-c) and restart it pointing at the new model.