Self/Group Assessment – Kyle O’Connor

My individual contribution to the project was building and training the machine learning model that would predict the close price of a stock. This included doing some research on different models and what would work best with time-series type predictions. This also included knowing what kinds of environments would be needed for each dependency to build the model. Building the model architecture and tuning hyper parameters was also an important phase that would produce the best results from our model. Collecting data to train our model on. Make sure that our data is formatted correctly for input to the model. We decided to do batches of 30 days to predict the next day. The training and validation is a tedious process to make sure the results we think we are training for are actually what we are training for.

I learned a lot about tensorflow backend and how certain data manipulation techniques work in the backend of tensorflow. There was a lot of debugging as far as that went. Also built more on my python competency as well as general knowledge of machine learning and how it works. A lot of the initial obstacles came from actually building a model that works. Of course you can just pick a model and start, but I wanted to make sure it was being built properly and it was the appropriate model for our data. The first days I spent coding I ran into a lot of dependency issues with tensorflow, as well as tensor shape/size issues when building the input/output of each layer in the model.

Our group produced a finished product that included an entire visualization platform as well as a univariate LSTM model that would predict the price of the next day given the previous 30 days. Especially because of the coronavirus I learned a lot about working remotely and having to collaborate with teammates when you can’t meet face to face. As a group we did a lot of pair-programming for certain aspects like the React JavaScript app so that everyone could kind of learn how the app works and how to build in react. Special recognition to Philip Tallo for helping out a lot in that area. Pair-programming worked sometimes and other times it was really hard to be productive when two people are working on the same problem. Philip and I also worked together on the model just discussing theoretically what would work what wouldn’t work. Both he and I are focused more in machine learning with our research so it helped to have someone to bounce ideas off of.

I would say that as a group, we each contributed evenly and we were very upfront and honest with each other as far as the workload is split. The easy part about that is that we are all roommates, so living together kind of made it easier to push each other to work on the project. It also made it easier to pair program with each other as we could almost always work face-to-face, until the coronavirus hit. One thing I learned is that communication is key, a lot of the problems that came up were from lack of communication.