Journal Report 7 10/13/19-10/26/19 Ben Schuman Computer Systems Research Lab Period 4, White

# **Daily Log**

### **Tuesday, October 15**

Continued NN implementation in tensorflow. Switched from TF 1 to the newer TF 2.0 which functions well with python 3.7. This enables me to take advantage of some of the newer functions of tensorflow, as well as not have to use an older version of python3. Didn't accomplish much in the realm of TF 2.0 implementation, but will continue on Thursday.

### **Tuesday October 17**

Ran into problems with NN implementation because I was attempting to migrate from TF 1.0 to 2.0. For some reason, the upgrade script within tensorflow was malfunctioning. I decided that it wasn't worth the hassle to attempt to find the bug so I simply scrapped some of the script I had and used TF 2.0 syntax. It isn't too different from TF 1 but now I know it is working correctly.

### **Monday October 21**

Started re-implementing tensorflow, this time using the 2.0 version. This meant I was a bit behind schedule, but in the long run I think it is worth it in order to use TF 2.0. Accomplished configuring NN within python script.

#### **Tuesday October 22**

Took the time today to configure data set into the training and testing set. I decided to use 30 percent of the data set as the testing set, following a common 70/30 rule. Used xlrd to facilitate the parsing of the spreadsheet, and used python's built in random module to decide what portions of the data set to use. Low-scale natural disasters that resulted in less than 5 people displaced were disregarded due to inherent inaccuracy.

## **Thursday October 24**

Finished NN implementation within python. I hope to begin training the Neural Network next week to identify weak points of the network and decide if I will need to change how the Neural Network is structured.

## **Timeline**

Date	Goal	Met
October 6-12	Finish structuring NN, begin imple-	Yes, although didn't start implement-
	mentation in tensorflow	ing tensorflow into my actual project because of many installation errors
October 13-19	Finish NN implementation in ten-	No, needed to push this back a week
	sorflow w/ keras, begin configuring	because I migrated from TF 1 to TF 2.0
	training / testing dataset	
October 20-26	Begin training of Neural Network,	No, again pushing this objective back
	just make sure it is starting to train	a week because of tensorflow migra-
	correctly	tion
October 27-	Begin training of Neural Network,	
November	just make sure it is starting to train	
2	correctly	
November 3-9	Determine based on previous results	
	if NN needs to be restructured. If so,	
	do it, if not, start to build accuracy of	
	NN.	

# Reflection

These past two weeks I have been focussed on the correct implementation of my Neural Network into python. When I realized that Tensorflow 2.0 was out, I decided to make the switch at the cost of the point I'm at for my project. However, making the switch didn't prove to be too dificult at the end, it just pushed my objectives back one week. Now that my dataset and my NN are ready, I will be able to train them this week to round out the quarter and be able to determine if, at the start of second quarter, I need to make any structural changes to my Neural Network, or if I can continue to try to build the accuracy of my Network.