Journal Report 8 10/27/19-11/9/19 Ben Schuman Computer Systems Research Lab Period 4, White

Daily Log

Monday, October 28

Attempted to run NN for the first time in Python towards the end of class after making some minor code structuring adjustments throughout the majority of the class. Runtime error involving TF implementation, specifically with data importing and communication between tensorflow and the data being imported.

Tuesday October 29

Fixed error that I ran into on Monday, began running neural network on an extremely limited dataset for 2 epochs to make sure everything was running smoothly. Code did not error out, will continue working on training the network on Thursday.

Thursday October 31

Slowly built up the amount of the training set I am using to train NN, encountered an error when I started using around half of the training set. Turns out it was simply an abnormality with how the data was entered into the spreadsheet for a few entries (it was treating these entries as strings and not numerals).

Wednesday November 6

Ran the neural network using the entirety of the training set for the first time, around 20 percent accuracy after 5 epochs. Did not have time to continue running for more due to it being an anchor day, will continue tomorrow and into next week.

Thursday November 7

Out sick, was able to run NN for a bit on my personal computer at home, however had to run from scratch again, was able to get up to around 10 epochs with 40 percent accuracy this time, so NN is already showing improvement.

Timeline

Date	Goal	Met
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,	Yes, neural network working as ex-
November	just make sure it is starting to train	pected for limited epochs
2	correctly	
November 3-9	Determine based on previous results	Yes, partially, don't know if NN
	if NN needs to be restructured. If so,	needs to be restructured for certain,
	do it, if not, start to build accuracy of	but based on current results every-
	NN.	thing looks fine.
November 10-	Continue training NN on laptop, ver-	
16	ify that NN is working properly	
November		

Reflection

These past two weeks I focused on getting the neural network up and running so I could begin testing and training the network using the data that I have been configuring for a while. While I ran into some errors towards the start of the process last week, they did not prove to be too much of a problem to fix. I am slowly starting to build accuracy of the NN, hopefully I can determine within the next week if my network is working as expected, and then I can consider running the network on one of the lab's GPUs to speed up the training process.