Journal Report 9 10/10/19-11/16/19 Ben Schuman Computer Systems Research Lab Period 4, White

Daily Log

Monday, November 11

Started playing around with other neural network configurations in tensorflow to see if anything works better than my current model. Came across keras sequential model which seems a bit simpler (in terms of setting up and modifying than my current, more explicitly coded model.

Tuesday October 12

Researched and played around with Keras. Sequential() model, took a bit to understand even after completing their tutorial using an example dataset from MNIST, but I eventually understood it. Began modyfing tutorial code to work with my dataset/model.

Thursday October 14

Continued implementing Keras. Sequential() model in seperate script from previous model. Finished everything except importing data for use within model, will need to complete this next week.

Timeline

Date	Goal	Met
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-	Yes, playing around with different
16	ify that NN is working properly	models now to see which works best
		for my project
November 17-	After experimenting with different	
23	models, decide which one is best for	
	project	
November 24-	Polish up network, begin training	
30	over the entire dataset to get prelim-	
	nary results.	
Winter Goal	Application takes geographical area	
	and type of disaster as inputs and	
	is able to predict with 70-75 percent	
	accuracy (based on Neural Network)	
	the magnitude of people displaced.	

Reflection

This week I was able to start looking into some other ways to model Neural Networks using tensorflow. Specifically Keras' sequential model looked like it might work for my project, so I am currently working on modeling my network using this and seeing if it might be a better alternative to the more explicitly coded model I have currently. After testing multiple models using a limited ammount of data (for efficiency purposes) I will be able to make a determination which works best for my project, and which I should use moving forward for the remainder of the year.