Journal Report 11
12/8/19-12/14/19
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Period 4, White

Daily Log

Monday, December 9

Converted tensorflow network to sklearn because of recommendation from friend. Sklearn works better with numerical data than tensorflow and will be able to generate models for the network better.

Tuesday December 10

Built and trained dataset on sklearn module. Tested linear, polynomial, rbf, and sigmoid kernels. RBF had the highest accuracy, so I decided to go with it for now. Redefined network accuracy to be within 2500 people of desired output due to generality of data.

Thursday December 12

Trained network for most of the class period. Peak network accuracy of approximately 72 percent. Conected network to UI so a user can run network directly from the UI using the dropdown menus.

Timeline

Date	Goal	Met
November 17-23	After experimenting with different models, decide which one is best for project	Yes, decided on sequential model
December 1-7	Continue training of network for preliminary results.	Yes, will begin training of network permanently next week
December 8-14	Train network to 70-75 percent accuracy for winter goal	Yes, met 70-75 percent goal
December 15-21	Polish UI so project can be easily downloaded from github/complete winter goal of having network run on UI with 70-75 percent accuracy	
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 made a lot of progress towards the completion of my Winter Goal by converting network to use sklearn rather than tensorflow. Starting this week, but mostly after winter break, I want to increase the specificity of my geographical data (will involve a bit more research to see if this kind of data exists) to prevent my network from converging to smaller values within certain areas (such as cities and other urban areas) where a natural disaster would cause higher displacement. Right now, my network functions off of areas that I believe are a bit too general for my application in the long-run.