Journal Report 11
11/26/19-12/6/19
Odin Woitek
Computer Systems Research Lab
Period 1, White

Daily Log

Monday November 18

Ran on zoidberg and got error "module 'tensorflow' has no attribute 'get_default_graph".

Monday November 18

Issue with negative dimension size, changed data format to channels_first. Then had an issue with incompatible shapes, I printed out the model summary and realized the dimensions for all the dense layers at the end of the network were incorrect because I forgot to add a Flatten() layer beforehand.

Tuesday November 19

Ran the network on zoidberg for ten epochs. After the first epoch, the accuracy hit 0.2615, and after that each epoch did not improve the accuracy very much, levelling out at 0.2617, which is about the same as what I had with my first model from a few weeks ago. I found that most models with large datasets use fit_generator, but since I have already created my datasets, I decided it was not worth completely changing the structure of my project.

Thursday November 21

I added the validation set to my model, but this did not help in improving the accuracy. I also tried to resize the images to 56x56 pixels, which would cut the amount of pixels that need to be processed to one fourth of what they are now, which could improve the speed of the network if this resizing doesn't result in the loss of important data for identifying authors. However, when I tried to implement tf.resize, it resulted in an error.

Timeline

Date	Goal	Met
November 11-15	Run network on zoidberg	Yes got model to train on zoidberg
November 18-22	Run and evaluate three models on zoidberg	Yes, looked at model summary, took note of accuracy as it trained
December 2-6	Improve accuracy to 0.3	No, tried implementing validation set, modifying other things but accuracy did not improve.
December 9-13	Successfully save model while running it on zoidberg and	
December 16-20	Train a model that can predict author identity with at least 0.7 accuracy on the test set	

Reflection

This week, I was able to start training my model and seeing some results, but I found that running it on zoidberg did not make much of a difference, since it did not improve much beyond the first few samples of the first epoch. There were a few things I hadn't tried yet, which were to implement the validation set and perhaps resize the images to make it faster. My attempt to resize the images resulted in an error and I did not feel that it was important to persue this as my issue at this point isn't really speed, but rather having an effective model. Adding the validation sets made no difference either, although in retrospect, I should have probably spent my time this week adjusting the model architecture rather than working on things that could really only amount to small optimizations at this point. I also had an issue trying to save my model while running it on zoidberg, which I will need to address as well.