Journal Report 2

9/9/19-9/13/19

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Daily Log

Monday September 9

Finished putting last touches on proposal. Created references page and added in-text citations to proposal.

Tuesday September 10

Registered an account for the IAM database and looked through the meta information. Looked at similar projects and noted that they often processed images from IAM by breaking the IAM images into patches. Planned how we are going to process our data so that we will be able to use it later on; the current idea is to do this patching process as was done in another study we referenced.

Thursday September 12

Looked into the IAM database and other studies in further detail with the aim of finding a way to divide images into patches. After looking through these more carefully, I was able to come up with a plan on how this will be done.

Timeline

Date	Goal	Met
August 27 - 30	Find a viable project to switch to.	Yes, began work on handwriting identification project.
September 9 - 13	Research handwriting identification and finish proposal.	No, we wrote the rationale and a description of how the project will work, but it is not completely finished yet.
September 16 - 20	Finish proposal and have a defined plan on how to generate sample image patches.	Yes, proposal was turned in and the plan was finished
September 23 - 27	Implement plan for generating sample image patches.	
September 23 - 27	Research Convolutional Neural Networks	

Reflection

This week I finished and turned in our proposals and began trying to find a way to organize the image data for training and testing the neural network. I ran into some trouble in the beginning with how exactly I was going to do this, but after looking more closely at related studies and the IAM database, I decided that the best plan would be to take images of the lines of text, which the IAM database provides, and resize them to a standard height of 113 pixels while preserving the aspect ratio (as distorting the image by changing the aspect ratio caused the models to have a massive drop in performance in previous studies). 113 by 113 patches will then be randomly cropped from the line. We will start by retrieving 16 patches per line, but this may later be adjusted as we see fit. While this method will be useful for generating training data easily, any useful applications of handwriting identification in the real world will require us to create a method of discerning lines ourselves. For now, we will use the resources provided to us by the IAM database so we can get to working on the neural network sooner, but we will eventually need to develop a method of extracting lines ourselves.