Kin Recognition Using Weighted Graph Embeddings - Progress Report

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1 Work Accomplished

I was able to implement the main algorithm, WGEML, from the paper, "Weighted Graph Embedding-Based Metric Learning for Kinship Verification". This included creating the functions that would get the necessary face descriptors, Local Binary Patterns, Histogram of Gradients, Scale-Invariant Feature Transform and a VGG face descriptor, from each image.

Furthermore, I implemented unit tests along the way to make sure that my functions were running as I expected them to run. I managed to get a code coverage of 97% for my unit tests, which excludes any scripts that were written.

2 Schedule

The project is currently on schedule. At this point in my schedule, I am supposed to be working on ablation studies which is what is currently happening. However, the original schedule had a few problems where I overestimated the amount of time to implement the penalty and intrinsic graphs but I also didn't schedule any time to write the scripts needed to run it end-to-end or any of the necessary data preparation functions to get the data into a format that is consistent with how I wrote my functions. Furthermore, I also didn't schedule any time to obtain any of the results. However, in the end, the amount of work I didn't schedule was done in the amount of time I overestimated in my schedule which means that I am still on track, even though the schedule partially changed in the contents.

3 Unexpected Difficulties

The main unexpected difficulties came from taking the data in the form that was downloaded and transforming it into the way I wanted it to be.

Other unexpected difficulties occurred from the paper I was implementing being vague on certain parts of the project.