Computer Vision: Assignment 2 Report

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The subspace size that I chose is scalable and is set to 1/10th the number of Eigen vectors provided. In this case, that means the subspace will be 409x4096. I chose this value based on experimentation and observation. For example, I first tried using a ratio of 1/20th, and while this was very fast, I noticed significant errors managed to slip through (people with different skin colours being matched, people wearing hats, different genders, etc.). With a ½ ratio, there was a noticeable (but not enormous) loss in performance, but I saw no difference in the quality of the matches versus the 1/10th ratio. A 1/10th ratio seemed to provide the best balance between accuracy and performance, with a slightly longer execution time than the 1/20th option, but much better accuracy.