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SmartHome Gesture Control Application Project Part 2 Report

The application I built managed to match all the requirements for the project by building four different functions. The first function completed task one by extracting a single frame from the videos and then extracting the gestures feature and labeling each feature. The second function does the same for the test videos, but it does not label the extracted features of the video frames. The third function utilizes cosine similarity to compare the test features to all the training features and find the value closest to one, and then assign that training feature's label to the given test feature. The fourth function is just a helper function for giving the results the proper label and then writing it to a CSV file. This approach worked and properly output 51 labels; however, the accuracy was very low. I think the best way to improve the accuracy would be to adjust the training videos to make them more defined, but without access to the CNN, it is questionable how much could be improved.