Sean Yang

12/17/18

Pd 4

My program is able to simulate keyboard actions now. I am using the keyboard package that simulates keyboard actions. It flips pages when it sees consecutive non-neutral gestures. I tested the program with the Kindle app on Windows and it worked fine. The core of my project is done. I’m quite happy with my progress so far.

I wasn’t satisfied with the accuracy of the classifier on the tilted heads. I tried to debug my code by printing out the distances to the closest neighbors. Although it was helpful, it was not enough. My distance function takes many relative position vectors into account and my key points are rotated. There are many variables that contribute to the distance to the closest neighbors. The best ways to make the classifier better are tuning the parameters and creating a threshold to make non-neutral gestures more accurate. However, there is always a tradeoff. When I try to eliminate the misdetections of the non-neutral gestures, the non-neutral gestures don’t get recognized as easily. On the other hand, when I try to make the classifier detect non-gestures better, I get misdetections more. I tuned the parameters to be more conservative so head tilt doesn’t create misdetections. I also put tilted neutral images into the neutral gesture training folder. This made neutral detection more accurate on the tilted faces. The improvements made the program more accurate for classifying the neutral gesture.

I looked at tutorials related to the web component of my project. It definitely seems possible. However, I still don’t have a good idea of how to do the web component of my project well because I never took any web courses previously. After talking to Evan, I realized that he also uses Python and needs a way to get live camera feed. He does computer security and is a lot better at web related things. He said he would be done soon. I will probably just ask for help from him after he is done.