3.1

It is observed from the face cluster plot that the faces with female gender are closer to each other and same for faces with male gender. Going deeper into the cluster tree among the male faces, we can see that the faces with identities mark and zane are more closer to each other than that of Alberto, hence their faces are more similar to each other than alberto. As for the faces with female gender, we can see that lisa and betty are closer to each other hence their faces more similar than that of wendy. However it is also observed that betty’s face, whether happy or sad, is closer to lisa s sad face than lisa s happy face. Lisa s sad face is closer hence more similar to betty’s happy face.

As for each identity their faces with both emotions are most close to each other.

So we can see that emotions do not affect the similarities of faces that much. Identities make a more significant difference. The most significant difference is gender

3.2

In case of the emotion cluster plot, we can see that the sad faces are closer and similar to each other than the happy faces regardless of gedner/identity. On checking the sad emotion cluster we see that lisa and mark are closer, zane and billy are also closer, etc. As for the happy emotion cluster we can see the same for lisa and alberto, zane and mark, etc. We also observe form the plot that wendys sad face is similar to lisa s happy face. Hence emotions categorise the facial features more than gender or identity

3.3

Mark\_sad: first 16 seconds: Gender and identity output start to get detected

17 s: more sure it’s a male and identity mark but identity zane is also detecting a little. Both happy and sad emotion is getting detected

19s: sad is more detected than happy

21s : Mark and male is more detected and zane detection is going down

Finally emotion is detected after gender/identity

Wendy\_happy: all 3 detect at same rate

Same for wnedy\_sad