MSU Group 5

Capstone Project #8

**Ethical Storyboarding Activity: Facial Expression Recognition**

Prompt One: Write a one-paragraph story describing a fictional person who was positively affected by a model trained with this data.

Aubrey is a someone who struggles with social-emotional agnosia. This means that she is unable to accurately perceive facial expressions, social cues, and things of that nature. In order to help her work on her social skills her psychiatrist introduced her to this facial expression recognition model. She has a list of faces that she recreates, and the model classifies them which allows her to practice expression perception. Thus, aiding in her interactions with people.

Prompt Two: Write a one-paragraph story describing a fictional person who was negatively affected by a model trained with these data.

Aiden is a candidate for a job at a new tech start up. One of the new techniques they use in their hiring process is allowing a facial expression recognition model to play a part in determining if a person is a good hire. Aiden naturally has lowered eyebrows and tightened lips, which according to the model are characteristics of an angry or disgusted emotions. This model lowered his chances of getting chosen as the new employee because it inaccurately classified his emotional state as one that was angry.

Prompt Three: Describe at least two sources of bias the model in your story could have.

One bias of the model in the story is that it is it is all inclusive and not specific to different cultures. This could cause bias because there are different physical traits that vary from person to person, some of which will make them more susceptible to being placed in an “emotional stereotype” of sorts. Another bias of the model

Prompt Four: Describe at least one way we could modify the model to mitigate this bias.

One way we could modify the model to mitigate the bias is to change the hyper-parameters to increase the accuracy of the model. By tweaking the hyper-parameters the model will be able to give more accurate results regarding the classification of facial emotions. You also could adjust the model’s decision threshold to increase accuracy.

Prompt Five: Describe at least one way we could modify the dataset to mitigate this bias.

One way we could modify the dataset to mitigate the bias is including information such as race, gender, and age. By including this information, we would be able to categorize the data more specifically. So, we would get more accurate results when the model is used to classify facial emotions because it is more inclusive and customized to different parameters.

Prompt Six: Describe at least one way we could modify the context surrounding the modelto mitigate this bias.

One way we could modify the context surrounding the model to mitigate the bias is