Detecting Human Emotions

By Peter Shin for DS 4002

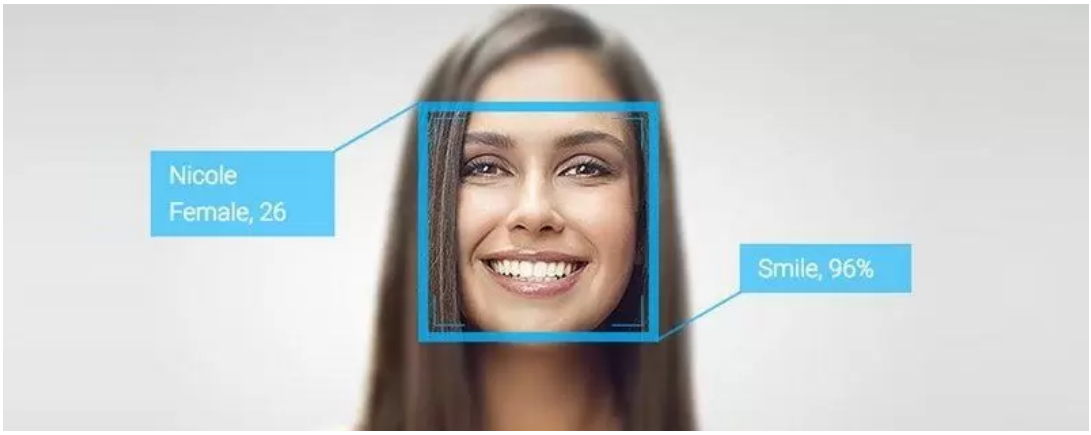

Image found: https://bayslope.com/can-artificial-intelligence-be-used-to-detect-human-emotions/

Expressing happiness, sadness, neutralness, and everything beyond and in between is a way that people communicate their mood or feelings. It is considered to be one of the most important non-verbal communication techniques.

Facial expression identification can help achieve great things in the area of human computer interaction (HCI). Things such as the application of facial emotion recognition to make robots model more convincing facial expression as well as using it to improve current limitations in facial recognition are just a few of the ways that emotion recognition is important for the future to come.

In this case study, you will be asked to create models using machine learning algorithms to predict facial expressions. You will use the FER-2013 dataset which can be found on Kaggle. This dataset includes train and test folder that each include 48x48 pixel images of seven different emotions, and it has been widely used by people in this space to develop and test machine learning models for emotion recognition tasks.

Your goal is provide a deliverable that includes exploratory data analysis on the images found in the dataset and use at least one machine larning algorithm to create a prediction model. Provide this code as well as any figures in the final submission.