Facial recognition

Data collection

* We collected our own data by taking frontal facial images of ourselves and celebrities

Information about facial recognition read from

* <https://www.pyimagesearch.com/2018/06/18/face-recognition-with-opencv-python-and-deep-learning/>
* <https://towardsdatascience.com/real-time-face-recognition-an-end-to-end-project-b738bb0f7348>
* <https://www.youtube.com/watch?v=jG3bu0tjFbk>
* <http://scipy-lectures.org/advanced/image_processing/>
* <https://www.youtube.com/watch?v=PmZ29Vta7Vc>
* <https://coding-robin.de/2013/07/22/train-your-own-opencv-haar-classifier.html>

Tools used:

* Requirements for imports are OpenCV, Pillow, Pickle, Os, numpy
* We used OpenCV features to help with this project
* We used “haarcascade\_frontalface\_default.xml” to help detect faces in the webcam
* We used faces-train.py to train the algorithm and to create our own yml file

To make the facial recognition more accurate,

* We converted colored images to grey to reduce color bias
* We used gradient vectors to to avoid lighting bias