* Opencv: face detection (medium issues)

+ CV2 can not be used in Android Studio since it is a python class.

+ Python can not be used for Android & opencv in case we wanted to code the whole thing on python

+ All of the cv2 functions (cascadeClassifier, detectMultiscale), we need to find somethings similar when we translate.

+ As Numpy is unavailable in Java we would need a lot of dynamic allocation since we can not know the dimensions of the image (4xN which N is number of faces & frame)

* TENSOR FLOW (big issue)

+ TF can not use in Android Studio since it uses python

+ Python can not be used for Android & TF, in case we wanted to code the whole thing on python

+ All of the TF functions (graph, import\_graph\_def,… 5 or 6 more functions), we need to find somethings similar when we translate.

+ Argparse (only python package) is a problem when parsing argument to TF, if not Argparse, we have to figure out what data type by our own (derived data type).

+ .pb file need to be open with TF only.

DO:

- Read classifier.py file, look at to tensor flow and numpy and argparse, and see if we can translate them

- Decide whether we stick with translating or writing our own CNN (writing in Android only). Trade offs: For training our own CNN a paper recently published had an accuracy of 69% and the facial expressions were on the dramatic end which I doubt the children we would get would have.

[https://www.sciencedirect.com/science/article/pii/S1877050917305264](opencv:%20face%20detection%20(medium%20issues)%20+%20CV2%20%20can%20not%20be%20used%20in%20Android%20Studio%20since%20it%20is%20a%20python%20class.%20+%20Python%20can%20not%20be%20used%20for%20Android%20&%20opencv%20in%20case%20we%20wanted%20to%20code%20the%20whole%20thing%20on%20python%20+%20All%20of%20the%20cv2%20functions%20(cascadeClassifier,%20detectMultiscale),%20we%20need%20to%20find%20somethings%20similar%20when%20we%20translate.%20+%20As%20Numpy%20is%20unavailable%20in%20Java%20we%20would%20need%20a%20lot%20of%20dynamic%20allocation%20since%20we%20can%20not%20know%20the%20dimensions%20of%20the%20image%20(4xN%20which%20N%20is%20number%20of%20faces%20&%20frame)%20TENSOR%20FLOW%20(big%20issue)%20+%20TF%20%20can%20not%20use%20in%20Android%20Studio%20since%20it%20uses%20python%20+%20Python%20can%20not%20be%20used%20for%20Android%20&%20TF,%20in%20case%20we%20wanted%20to%20code%20the%20whole%20thing%20on%20python%20+%20All%20of%20the%20TF%20functions%20(graph,%20import_graph_def,…%205%20or%206%20more%20functions),%20we%20need%20to%20find%20somethings%20similar%20when%20we%20translate.%20+%20Argparse%20(only%20python%20package)%20is%20a%20problem%20when%20parsing%20argument%20to%20TF,%20if%20not%20Argparse,%20we%20have%20to%20figure%20out%20what%20data%20type%20by%20our%20own%20(derived%20data%20type).%20+%20.pb%20file%20need%20to%20be%20open%20with%20TF%20only.%20%20DO:%20-%20Read%20classifier.py%20file,%20look%20at%20to%20tensor%20flow%20and%20numpy%20and%20argparse,%20and%20see%20if%20we%20can%20translate%20them%20-%20Decide%20whether%20we%20stick%20with%20translating%20or%20writing%20our%20own%20CNN%20(writing%20in%20Android%20only).%20Trade%20offs:%20For%20training%20our%20own%20CNN%20a%20paper%20recently%20published%20had%20an%20accuracy%20of%2069%25%20and%20the%20facial%20expressions%20were%20on%20the%20dramatic%20end%20which%20I%20doubt%20the%20children%20we%20would%20get%20would%20have.%20%20https://www.sciencedirect.com/science/article/pii/S1877050917305264)