Required python packages

Install MTCNN

$ pip install mtcnn

This implementation requires OpenCV>=4.1 and Keras>=2.0.0 (any Tensorflow supported by Keras will be supported by this MTCNN package). If this is the first time you use tensorflow, you will probably need to install it in your system:

$ pip install tensorflow 2.10.0

or with conda

$ conda install tensorflow

keras 2.10.0

scikit-learn 1.1.3

python 3.9.13

opencv-python 4.6.0.66

numpy 1.23.1

pandas 1.5.0

scipy 1.9.2

matplotlib 3.6.1

To run the program:

For inputting single video file from terminal

python Singlevideo\_processing.py "/Users/mohan/Sulochana/KlarityAI/IMG\_1768.MOV"

For inputting folder from terminal

python videofloder\_main.py "/Users/mohan/Sulochana/KlarityAI/Test\_videos"

facedetection\_mtcnn.py – this function extract the face from video frames

derive\_pca.py – return reconstructed pca

Process\_PPG.py - process the PPG signal

Find\_features .py – find the time and frequency domain features of PPG