ReadMe

Language: Python
Components :
Python Files:

1. align.py
2. data.py
3. facerecognition.py
4. facerecognitionconvert.py
5. IdentityMetadata.py
6. main.py
7. model.py
8. opencv_Tracking.py
9. TripletLossLayer.py
10. utils.py
11. vedioRun.py
12. yolo_video.py

Folder Structure:

1. DataPreprocessing
2. images
3. ImplementedVedios
4. models
5. output
6. vedios
7. weights
8. yolo-coco
9. shape_predictor_68_face_landmarks.dat

Run Code (/face-recognition-master/**):**

1. **Celebrity Face Recognition**
   python main.py 2

   Arguments:
   - Second argument i.e. 2 will be the image you want to predict if value not given, by default it will take 10

2. **COCO Realtime Multiple Object Detection**
   python yolo_video.py --input vedios/airport.mp4 --output output/airport_output.avi --yolo yolo-coco

   Arguments:
   - --input : vedios/airport.mp4 (Here, we have to copy video in /vedios folder and give video name in which you want to detect objects)
   - --output : output/airport_output.avi (Here, we will give location where we want to save videos after multi object detection,also give video name with extension .avi)

3. **Realtime Object Detection (Webcam)**
   python opencv_Tracking.py --camera_or_vedio c

   Instructions:
   - Space to hold

- mouse to draw box and space to track object
- Q to exit camera

4. **Realtime Object Detection (Video)**
   python opencv_Tracking.py --camera_or_vedio v
   OR
   python opencv_Tracking.py --camera_or_vedio v --video vedios/chaplin.mp4
   OR
   python opencv_Tracking.py --camera_or_vedio v --tracker tld

   Arguments:
   - -- video : vedios/airport.mp4 (Here, we have to copy video in /vedios folder in which we want to track the object)
   - --tracker (Optional): tracker can be any of the below:
     - csrt
     - kcf
     - boosting
     - mil
     - tld
     - medianflow
     - mosse

   Instructions:
   - Space to hold
   - mouse to draw box and space to track object
   - Q to exit camera

Result:
All the implemented project results can be seen in /ImplementedVedios folder for sample

1. **Celebrity Face Recognition**
   Celebrity_Prediction.png
   Celebrity_Prediction2.png

2. **COCO Realtime Multiple Object Detection**
   airport_output.avi
   car_chase_01_output.avi
   Multiobjectdetection_vedio.webm

3. **Realtime Object Detection (Webcam)**
   webcam.webm

4. **Realtime Object Detection (Video)**
   SingleObjec_Chaplin.webm