face-recognition

February 6, 2024

[ ]:
```
import numpy as np
import cv2 as cv
```

[ ]:
```
people = ['Ben Afflek', 'Elton John', 'Jerry Seinfield', 'Madonna', 'Mindy␣
↪Kaling']
haar_cascade = cv.CascadeClassifier('../haarcascades/haar_face.xml')
```

[ ]:
```
features = np.load('features.npy', allow_pickle=True)
labels = np.load('labels.npy')
```

[ ]:
```
face_recognizer = cv.face.LBPHFaceRecognizer_create()
face_recognizer.read('face_trained.yml')
```

[ ]:
```
img = cv.imread(r'C:\Users\david\Documents\openCv\Images\faces\val\elton_john\1.
↪jpg')
```

[ ]:
```
gray = cv.cvtColor(img, cv.COLOR_BGR2GRAY)
cv.imshow('Person', gray)
```

Detect the face in the image

[ ]:
```
paces_rect = haar_cascade.detectMultiScale(gray, scaleFactor=1.1,␣
↪minNeighbors=4)
```

[ ]:
```
for (x,y,w,h) in paces_rect:
  faces_roi = gray[y:y+h, x:x+w]
```

[ ]:
```
label, confidence = face_recognizer.predict(faces_roi)
  print(f'Label = {people[label]} with a confidence of {confidence}')
```

[ ]:
```
cv.putText(img, str(people[label]), (20,20), cv.FONT_HERSHEY_COMPLEX, 1.0,␣
↪(0,255,0), thickness=2)
  cv.rectangle(img, (x,y), (x+w, y+h), (0,255,0), thickness=2)
```

[ ]:
```
cv.imshow('Detected Face', img)
```

[ ]:
```
cv.waitKey(0)
```