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"""OBJECT DETECTION WEB CAM"""
# quite similar as object detection

import cv2

# getting vid from cv2.VideoCapture
video = cv2.VideoCapture(0)
a = 1

while True:
    a = a +1
    face_cascade = cv2.CascadeClassifier("C:\\Users\\deep2\\AppData\\Roaming\\Python\\Python36\\site-packages\\cv2\\data\\haarcascade_fron
    eye_cascade = cv2.CascadeClassifier("C:\\Users\\deep2\\AppData\\Roaming\\Python\\Python36\\site-packages\\cv2\\data\\haarcascade_eye.x
    upperbody_cascade = cv2.CascadeClassifier("C:\\Users\\deep2\\AppData\\Roaming\\Python\\Python36\\site-packages\\cv2\\data\\haarcascade
    smile_cascade = cv2.CascadeClassifier("C:\\Users\\deep2\\AppData\\Roaming\\Python\\Python36\\site-packages\\cv2\\data\\haarcascade_smi
    profileface_cascade = cv2.CascadeClassifier("C:\\Users\\deep2\\AppData\\Roaming\\Python\\Python36\\site-packages\\cv2\\data\\haarcasca
    lowerbody_cascade = cv2.CascadeClassifier("C:\\Users\\deep2\\AppData\\Roaming\\Python\\Python36\\site-packages\\cv2\\data\\haarcascade
    fullbody_cascade = cv2.CascadeClassifier("C:\\Users\\deep2\\AppData\\Roaming\\Python\\Python36\\site-packages\\cv2\\data\\haarcascade_
    frontalface_alt_cascade = cv2.CascadeClassifier("C:\\Users\\deep2\\AppData\\Roaming\\Python\\Python36\\site-packages\\cv2\\data\\haarc

    # check is a boolian operator that returns TRUE if webcam is working
    # frame gets the frame(imgs) from the vid camera
    check, frame = video.read()
    gray_img = cv2.cvtColor(frame,cv2.COLOR_BGR2GRAY)
    gray_img = cv2.resize(gray_img, (int(gray_img.shape[1]/2),int(gray_img.shape[0]/2)))
    img=gray_img
#     img=frame
    faces = face_cascade.detectMultiScale(gray_img, 1.05, 5)
    eyes = eye_cascade.detectMultiScale(gray_img, 1.05, 5)
    upperbody = upperbody_cascade.detectMultiScale(gray_img, 1.05, 5)
    smile = smile_cascade.detectMultiScale(gray_img, 1.05, 5)
    profileface = profileface_cascade.detectMultiScale(gray_img, 1.05, 5)
    lowerbody = lowerbody_cascade.detectMultiScale(gray_img, 1.05, 5)
    fullbody = fullbody_cascade.detectMultiScale(gray_img, 1.05, 5)
    frontalface_alt = frontalface_alt_cascade.detectMultiScale(gray_img, 1.05, 5)

    for x,y,w,h in faces:
        rec_img = cv2.rectangle(img, (x,y), (x+w, y+h), (0,255,0) ,0)
        face_text = cv2.putText(img, "FACE",(x, y+10),cv2.FONT_HERSHEY_COMPLEX_SMALL,.7,(0,255,0))
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    for x,y,w,h in eyes:
        eye_img = cv2.rectangle(img, (x,y), (x+w, y+h), (255,0,0), 3)
        eyes_text = cv2.putText(img, "eyes",(x, y+10),cv2.FONT_HERSHEY_COMPLEX_SMALL,.7,(225,0,0))

    for x,y,w,h in upperbody:
        upperbody_img = cv2.rectangle(img, (x,y), (x+w, y+h), (0,0,255), 3)
        upperbody_text = cv2.putText(img, "upper body",(x, y+10),cv2.FONT_HERSHEY_COMPLEX_SMALL,.7,(0,0,255))

    for x,y,w,h in smile:
        smile_img = cv2.rectangle(img, (x,y), (x+w, y+h), (0,100,0), 3)
        smile_text = cv2.putText(img, "smile",(x, y+10),cv2.FONT_HERSHEY_COMPLEX_SMALL,.7,(0,100,0))

    for x,y,w,h in profileface:
        profile_img = cv2.rectangle(img, (x,y), (x+w, y+h), (100,0,0), 3)
        profile_text = cv2.putText(img, "profile_",(x, y+10),cv2.FONT_HERSHEY_COMPLEX_SMALL,.7,(100,0,0))

    for x,y,w,h in lowerbody:
        lowerbody_img = cv2.rectangle(img, (x,y), (x+w, y+h), (0,0,100), 3)
        lowerbody_text = cv2.putText(img, "lowerbody",(x, y+10),cv2.FONT_HERSHEY_COMPLEX_SMALL,.7,(0,0,100))

    for x,y,w,h in fullbody:
        fullbody_img = cv2.rectangle(img, (x,y), (x+w, y+h), (150,0,0), 3)
        fullbody_text = cv2.putText(img, "fullbody",(x, y+10),cv2.FONT_HERSHEY_COMPLEX_SMALL,.7,(150,0,0))

    for x,y,w,h in frontalface_alt:
        frontalface_img = cv2.rectangle(img, (x,y), (x+w, y+h), (0,150,0), 3)
        frontalface_text = cv2.putText(img, "frontal_face",(x, y+10),cv2.FONT_HERSHEY_COMPLEX_SMALL,.7,(100,150,0))
    cv2.imshow('capturing', img)

    key = cv2.waitKey(1)

    if key == ord('q'):
        break

print(a)
video.release

cv2.destroyAllWindows()
```