

Assignment 6

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Develop a python code to detect any object using Haar cascade classifier.

```
import cv2

face_cascade = cv2.CascadeClassifier(cv2.data.harcascades +
'haarcascade_frontalface_default.xml')
eye_cascade = cv2.CascadeClassifier(cv2.data.harcascades +
'haarcascade_eye.xml')

cap=cv2.VideoCapture(0)

while True:
    _, img = cap.read()
    gray = cv2.cvtColor(img, cv2.COLOR_BGR2GRAY)

    faces = face_cascade.detectMultiScale(gray, 1.3, 5)
    #faces = face_cascade.detectMultiScale(gray)

    for (x,y,w,h) in faces:
        cv2.rectangle(img,(x,y),(x+w,y+h),(255,0,0),2)
        roi_gray = gray[y:y+h, x:x+w]
        roi_color = img[y:y+h, x:x+w]
        eyes = eye_cascade.detectMultiScale(roi_gray)
        for (ex,ey,ew,eh) in eyes:
            cv2.rectangle(roi_color,(ex,ey),(ex+ew,ey+eh),(0,255,0),2)

    cv2.imshow('img',img)

    k = cv2.waitKey(0)
    if k == 27:          # wait for ESC key to exit
        cv2.destroyAllWindows()
    elif k == ord('s'): # wait for 's' key to save and exit
        cv2.imwrite('messigray.png',img)
        cv2.destroyAllWindows()

cap.release()
```

