##### 机器学习的人脸检测模块分析

（三）人脸识别方面的测试

Machine Leaning regarding to face detection:

人脸，

人形

边界

数据库

OpenCv haarcascade eye,frontface,fulbody,listence plate

<https://github.com/opencv/opencv/tree/master/data/haarcascades>

用harr-cascade open source 提供的人脸classifer

Digivisual 三款Model中的人脸检测试验：

试验内容：

Trained harcascade include:

1,frontal face

2,eye

3,watch

import numpy as np

import cv2

face\_cascade = cv2.CascadeClassifier('haarcascade\_frontalface\_default.xml')

eye\_cascade = cv2.CascadeClassifier('haarcascade\_eye.xml')

#this is the cascade we just made. Call what you want

watch\_cascade = cv2.CascadeClassifier('watchcascade10stage.xml')

cap = cv2.VideoCapture(0)

while 1:

ret, img = cap.read()

gray = cv2.cvtColor(img, cv2.COLOR\_BGR2GRAY)

faces = face\_cascade.detectMultiScale(gray, 1.3, 5)

# add this

# image, reject levels level weights.

watches = watch\_cascade.detectMultiScale(gray, 50, 50)

# add this

for (x,y,w,h) in watches:

cv2.rectangle(img,(x,y),(x+w,y+h),(255,255,0),2)

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(30) & 0xff

if k == 27:

break

cap.release()

cv2.destroyAllWindows()