

single face detection

In [3]:

```
try:
    import cv2
except Exception as e:
    print("please install cv2 module")
from random import randrange as r
#loading trained harcascade dataset
data=cv2.CascadeClassifier("C:\\Users\\LAEEQAKBAR\\Desktop\\cv2\\opencv\\data\\haarcasca
des\\haarcascade_frontalface_default.xml")
#reading the image through cv2
img=cv2.imread("deepika.jpg")

#displaying the image and convert to
#cv2.imshow(singlewindow,img)

grayimg=cv2.cvtColor(img,cv2.COLOR_BGR2GRAY)

#cv2.imshow("single_person",grayimg) # one arugemnt window name and 2nd arguments image t
o read

# identify the fce coordinates

facecoordinates=data.detectMultiScale(grayimg,1.1,4)
#detectmutlisclae will detect the img small to big and find the coordinates
#print(facecoordinates)
#cv2.waitKey() # pause the window untillthe next line of code
#converion of black and white
#openccv works on black and white
#grayimg=cv2.cvtColor(img,cv2.COLOR_BGR2GRAY)
#[[805 578 200 200]
# [343 194 363 363]
#[377 340 300 300]]
print(facecoordinates)

x,y,w,h=facecoordinates[1]
cv2.rectangle(img, (x,y), (x+w,y+h), (0,234,256),3)
cv2.imshow("window",img)
cv2.waitKey()
```

```
[[805 578 200 200]
 [343 194 363 363]]
```

Out[3]:

-1

multiface detection

In []:

```
import cv2
from random import randrange as r
#loading trained harcascade dataset
data=cv2.CascadeClassifier("C:\\Users\\LAEEQAKBAR\\Desktop\\cv2\\opencv\\data\\haarcasca
des\\haarcascade_frontalface_default.xml")
#reading the image through cv2
img=cv2.imread("sample.jpg")

#displaying the image and convert to
#cv2.imshow(singlewindow,img)

grayimg=cv2.cvtColor(img,cv2.COLOR_BGR2GRAY)
```

```
#cv2.imshow("single_person",grayimg) # one arugemnt window name and 2nd arguments image to read

# identify the fce coordinates

facecoordinates=data.detectMultiScale(grayimg,1.1,4)
#detectmutlisclae will detect the img small to bug and find the coordinates
#print(facecoordinates)
#cv2.waitKey() # pause the window untillthe next line of code
#converion of black and white
#openccv works on black and white
#grayimg=cv2.cvtColor(img,cv2.COLOR_BGR2GRAY)
#[[805 578 200 200]
# [343 194 363 363]
#[377 340 300 300]]
print(facecoordinates)
for i in range(0,7):
    if i ==0:
        continue
    x,y,w,h=facecoordinates[i]
    cv2.rectangle(img, (x,y) , (x+w,y+h) , (0,234,256) , 3)
cv2.imshow("window",img)
cv2.waitKey()
```

```
[[643 166 130 130]
 [813 183 103 103]
 [500 202 85 85]
 [662 218 90 90]
 [250 240 75 75]
 [379 261 71 71]
 [138 273 77 77]]
```

live video face detection

In []:

```
try:
    import cv2
except Exception as e:
    print("install the cv2 module")
from random import randrange as r
#reading the trained dataset
data=cv2.CascadeClassifier("C:\\Users\\LAEEQAKBAR\\Desktop\\cv2\\opencv\\data\\haarcasca
des\\haarcascade_frontalface_default.xml")

#displaying the image and convert to
#cv2.imshow(singlewindow,img)
#open the webcamm
webcam=cv2.VideoCapture(0) # default is 0 or you can pass video file name
# for continious capturing
while True:

    success,img=webcam.read()

    grayimg=cv2.cvtColor(img,cv2.COLOR_BGR2GRAY) # convert to gray

    facecoordinates=data.detectMultiScale(grayimg,1.1,4)

    for x,y,w,h in facecoordinates:

        cv2.rectangle(img, (x,y) , (x+w,y+h) , (0,234,256) , 2)

    cv2.imshow("window",img)

    key=cv2.waitKey(30)

    if (key==81 or key==113):
        break
```

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webcam.release()
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