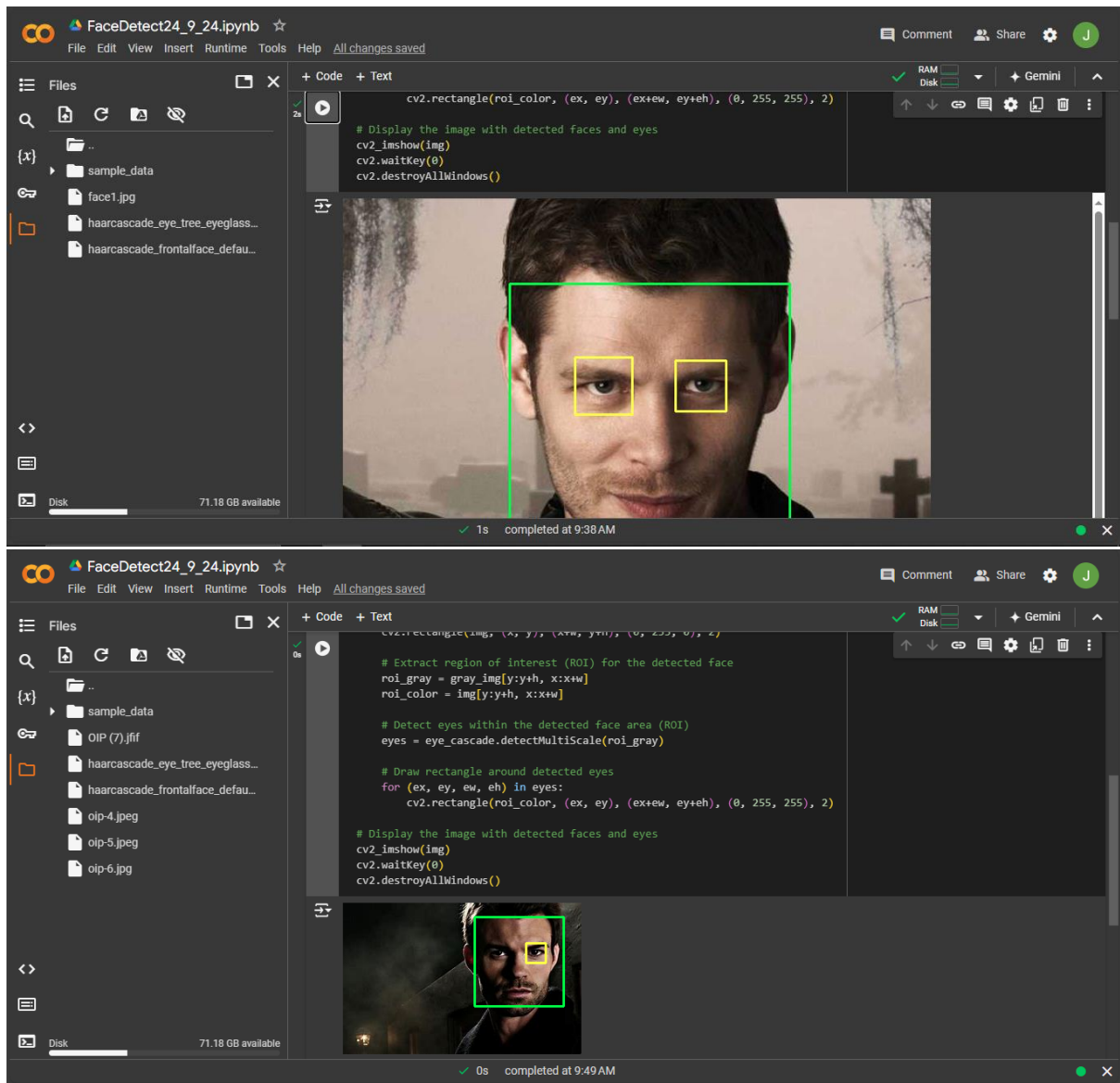


10-10-2024

# HAAR CASCADE OBJECT DETECTION FOR EYE AND FACE IN PYTHON USING OPEN CV ON FACIAL IMAGE DATA

HU22CSEN0100287



FaceDetect24\_9\_24.ipynb

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Files

- sample\_data
- OIP (10).jiff
- OIP (11).jiff
- OIP (7).jiff
- OIP (8).jiff
- OIP (9).jiff
- download (13).jiff
- haarcascade\_eye\_tree\_eyeglass...
- haarcascade\_frontalface\_defau...
- oip-4.jpeg
- oip-5.jpeg
- oip-6.jpg

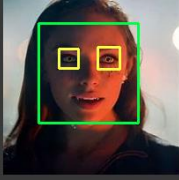
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```
# Detect eyes within the detected face area (ROI)
eyes = eye_cascade.detectMultiScale(roi_gray)

# Draw rectangle around detected eyes
for (ex, ey, ew, eh) in eyes:
    cv2.rectangle(roi_color, (ex, ey), (ex+ew, ey+eh), (0, 255, 255), 2)

# Display the image with detected faces and eyes
cv2.imshow('img')
cv2.waitKey(0)
cv2.destroyAllWindows()
```



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FaceDetect24\_9\_24.ipynb

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- download (13).jiff
- download (14).jiff
- download (15).jiff
- download (16).jiff
- haarcascade\_eye\_tree\_eyegla...
- haarcascade\_frontalface\_def...

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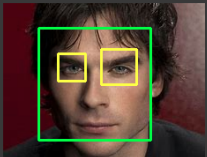
```
cv2.rectangle(imgs, (x, y), (x+w, y+h), (0, 255, 0), 2)

# Extract region of interest (ROI) for the detected face
roi_gray = gray_img[y:y+h, x:x+w]
roi_color = img[y:y+h, x:x+w]

# Detect eyes within the detected face area (ROI)
eyes = eye_cascade.detectMultiScale(roi_gray)

# Draw rectangle around detected eyes
for (ex, ey, ew, eh) in eyes:
    cv2.rectangle(roi_color, (ex, ey), (ex+ew, ey+eh), (0, 255, 255), 2)

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FaceDetect24\_9\_24.ipynb

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- download (14).jiff
- download (15).jiff
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- haarcascade\_eye\_tree\_eyegla...

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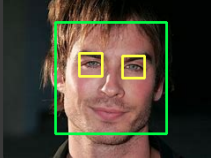
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# Display the image with detected faces and eyes
cv2.imshow('img')
cv2.waitKey(0)
cv2.destroyAllWindows()
```



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