

```

1 import cv2
2
3 # Load the pre-trained cascade classifiers for
  detecting the face and the nose
4 face_cascade = cv2.CascadeClassifier(r"C:\Users\rkssp
  \OneDrive\Desktop\MAIN TELFLOGIC\Human Pose
  Estimation\haarcascade_frontalface_default.xml")
5 nose_cascade = cv2.CascadeClassifier(r'C:/Users/rkssp
  /Downloads/haarcascade_mcs_nose.xml')
6
7
8 # Function to detect face mask using webcam
9 def detect_face_mask():
10     # Initialize the webcam
11     cap = cv2.VideoCapture(0)
12
13     while True:
14         # Read a frame from the webcam
15         ret, frame = cap.read()
16
17         # Convert the frame to grayscale
18         gray = cv2.cvtColor(frame, cv2.COLOR_BGR2GRAY
19 )
20
21         # Detect faces in the frame
22         faces = face_cascade.detectMultiScale(gray, 1
23 .1, 4)
24
25         # Loop through each face
26         for (x, y, w, h) in faces:
27             # Draw a rectangle around the face
28             cv2.rectangle(frame, (x, y), (x + w, y +
29 h), (255, 0, 0), 2)
30
31             # Get the region of interest (ROI)
32             containing the nose
33             roi_gray = gray[y:y + h, x:x + w]
34
35             # Detect noses in the ROI
36             noses = nose_cascade.detectMultiScale(
37 roi_gray)

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33
34         # If no noses are detected, the person is
        wearing a mask
35         if len(noses) == 0:
36             cv2.putText(frame, 'Mask', (x, y - 10
), cv2.FONT_HERSHEY_SIMPLEX, 0.9, (36, 255, 12), 2)
37         else:
38             cv2.putText(frame, 'No Mask', (x, y
- 10), cv2.FONT_HERSHEY_SIMPLEX, 0.9, (0, 0, 255), 2
)
39
40         # Display the output frame
41         cv2.imshow('Face Mask Detection', frame)
42
43         # Break the loop if 'q' is pressed
44         if cv2.waitKey(1) & 0xFF == ord('q'):
45             break
46
47         # Release the webcam and close all OpenCV windows
48         cap.release()
49         cv2.destroyAllWindows()
50
51
52 # Call the function to start face mask detection
        using webcam
53 detect_face_mask()
54
```