```
import cv2

# Load pre-trained Haar Cascade classifier for face detection
face_cascade           =           cv2.CascadeClassifier(cv2.data.haarcascades           +
'haarcascade_frontalface_default.xml')

# Load the input image
img = cv2.imread('output/sample_input.jpg')
gray = cv2.cvtColor(img, cv2.COLOR_BGR2GRAY)

# Detect faces
faces = face_cascade.detectMultiScale(gray, scaleFactor=1.1, minNeighbors=5)

# Draw rectangles around the faces
for (x, y, w, h) in faces:
    cv2.rectangle(img, (x, y), (x+w, y+h), (255, 0, 0), 2)

# Save output image
cv2.imwrite('output/face_detected_output.jpg', img)
print("Face detection completed. Output saved to 'output/face_detected_output.jpg'")
```