Program for smile and face detection

Program

import cv2  
  
face\_cascade = cv2.CascadeClassifier(cv2.data.haarcascades + 'haarcascade\_frontalface\_default.xml')  
smile\_cascade = cv2.CascadeClassifier(cv2.data.haarcascades + 'haarcascade\_smile.xml')  
  
image\_path = "C:/Users/Vignesh G/Downloads/pexels-daniel-xavier-908602.jpg"  
image = cv2.imread(image\_path)  
  
gray\_image = cv2.cvtColor(image, cv2.COLOR\_BGR2GRAY)  
  
  
faces = face\_cascade.detectMultiScale(gray\_image, scaleFactor=1.1, minNeighbors=5, minSize=(30, 30))  
  
for (x, y, w, h) in faces:  
 cv2.rectangle(image, (x, y), (x + w, y + h), (0, 255, 0), 3)  
  
 roi\_gray = gray\_image[y:y + h, x:x + w]  
 roi\_color = image[y:y + h, x:x + w]  
  
 smiles = smile\_cascade.detectMultiScale(roi\_gray, scaleFactor=1.8, minNeighbors=20)  
  
 for (sx, sy, sw, sh) in smiles:  
 cv2.rectangle(roi\_color, (sx, sy), (sx + sw, sy + sh), (255, 0, 0), 2)  
  
cv2.namedWindow("Smile Detection", cv2.WINDOW\_NORMAL)  
cv2.imshow("Smile Detection", image)  
cv2.resizeWindow("Smile Detection", 800, 650)  
  
cv2.waitKey(0)  
cv2.destroyAllWindows()

Output

