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11 import cv2
12 import numpy as np
13
14 # # ex-04 마스킹 과제는 흰색대신 이미지를 넣어주시면 됩니다. (원하는 이미지 혹은 얼굴이미지)
15 # 마스킹에 흰색 대신 이미지 넣기
16 mask = np.zeros((683,1024,3), dtype='uint8')
17 cv2.rectangle(mask, (60,50), (280,280), (255,255,255), -1)
18 cv2.rectangle(mask, (420,50), (550,230), (255,255,255), -1)
19 cv2.rectangle(mask, (750,50), (920,280), (255,255,255), -1)
20 # cv2.imshow("...", mask)
21 # cv2.waitKey(0)
22
23 face_cascade = cv2.CascadeClassifier('haarcascade_frontalface_default.xml')
24
25 # Loading the image - 얼굴 이미지 데이터 읽기
26 img = cv2.imread('./muhan.jpg')
27 cv2.imshow('image show',img)
28 cv2.waitKey(0)
29
30 # Converting the image into grayscale 그레이로 바꿔줌
31 gray = cv2.cvtColor(img, cv2.COLOR_BGR2GRAY)
32 faces = face_cascade.detectMultiScale(gray, 1.1, 4)
33 detected_faces = []
34 # Defining and drawing the rectangles around the face
35 for (x,y,w,h) in faces:
36     cv2.rectangle(img, (x,y), (x+w, y+h), (255, 0, 255), 2)
37     # 색상 # 선의굵기
38     detected_faces.append(img[y:(y+h), x:(x+w)])
39
40 cv2.imshow("check face detecting", img)
41 cv2.waitKey(0)
42
43 resize_size = [((60,50), (280,280)), ((420,50), (550,230)), ((750,50), (920,280))]
44
45 for i in range(len(detected_faces)):
46     x_width = abs(resize_size[i][0][0]-resize_size[i][1][0])
47     y_width = abs(resize_size[i][0][1]-resize_size[i][1][1])
48     detected_faces[i] = cv2.resize(detected_faces[i], (x_width, y_width))
49
50 # cv2.imshow("check face detecting", detected_faces[i])
51 # cv2.waitKey(0)
52
53 # cv2.imshow("check face detecting", mask[resize_size[i][0][1]:resize_size[i][0][1]+y_width, resize_size[i][0][0]:resize_size[i][0][0]+x_width])
54 # cv2.waitKey(0)
55
56 mask[resize_size[i][0][1]:resize_size[i][0][1]+y_width, resize_size[i][0][0]:resize_size[i][0][0]+x_width] = detected_faces[i]
57
58 cv2.imshow("check face detecting", mask)
59 cv2.waitKey(0)

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