import cv2

import os

import pyautogui

import BlockFace

import HandTrackingModule as htm

wCam, hCam = 640, 480

cap =cv2.VideoCapture(0)

cap.set(3, wCam)

cap.set(4, hCam)

folderPath = "Fingerimages"

myList = os.listdir(folderPath)

print(myList)

overlayList = []

for imPath in myList:

    image = cv2.imread(f'{folderPath}/{imPath}')

    #print(f'{folderPath}/{imPath}')

    overlayList.append(image)

print(len(overlayList))

pTime = 0

detector = htm.handDetector(detectionCon=0.75)

tipIds = [4, 8, 12, 16, 20]

while True:

    success, img = cap.read()

    #BlockFace.detect\_face(img, block=True)

    img = detector.findHands(img)

    lmList = detector.findPosition(img, draw=False)

    if len(lmList) != 0:

        fingers = []

        # Thumb

        if lmList[tipIds[0]][1] > lmList[tipIds[0] - 1][1]:

            fingers.append(1)

        else:

            fingers.append(0)

        # 4 Fingers

        for id in range(1, 5):

            if lmList[tipIds[id]][2] < lmList[tipIds[id] - 2][2]:

                fingers.append(1)

            else:

                fingers.append(0)

        totalFingers = fingers.count(1)

        print(totalFingers)

        try:

            if totalFingers == 0:

                cv2.putText(img, str('Pause'), (10,70), cv2.FONT\_HERSHEY\_PLAIN, 3, (255,0,255), 3)

                pyautogui.hotkey('ctrl','space')

            elif totalFingers == 1 :

                pyautogui.hotkey('ctrl', 'up')

                cv2.putText(img, str('Volume Up'), (10,70), cv2.FONT\_HERSHEY\_PLAIN, 3, (255,0,255), 3)

            elif totalFingers == 2:

                cv2.putText(img, str('Volume Down'), (10,70), cv2.FONT\_HERSHEY\_PLAIN, 3, (255,0,255), 3)

                pyautogui.hotkey('ctrl', 'down')

            elif totalFingers == 3:

                cv2.putText(img, str('Forward'), (10,70), cv2.FONT\_HERSHEY\_PLAIN, 3, (255,0,255), 3)

                pyautogui.hotkey('ctrl', 'right')

            elif totalFingers == 4:

                cv2.putText(img, str('Backward'), (10,70), cv2.FONT\_HERSHEY\_PLAIN, 3, (255,0,255), 3)

                pyautogui.hotkey('ctrl', 'left')

            elif totalFingers == 5:

                cv2.putText(img, str('Play'), (10,70), cv2.FONT\_HERSHEY\_PLAIN, 3, (255,0,255), 3)

                pyautogui.hotkey('ctrl','x')

            else:

                pass

        except:

            pass

    cv2.imshow("Image", img)

    cv2.waitKey(1)