# importing packages

import cv2

import mediapipe as mp

# used to convert protobuf message to a dictionary

from google.protobuf.json\_format import MessageToDict

# building the model

mpHands = mp.solutions.hands

hands = mpHands.Hands(

static\_image\_mode=False,

min\_detection\_confidence=0.75,

min\_tracking\_confidence=0.75,

max\_num\_hands=2)

# reading from webcam

webcam = cv2.VideoCapture(0)

while True:

success, img = webcam.read()

# flipping the image for model

original\_img=img.copy() # copying the original image

img = cv2.flip(img, 1)

# converting to RGB for model (model needs RGB img)

RGB\_img = cv2.cvtColor(img, cv2.COLOR\_BGR2RGB)

# passing the image to the model

results = hands.process(RGB\_img)

# if there is any result (if any hand is detected)

if results.multi\_hand\_landmarks:

if len(results.multi\_handedness) == 2: # if two hands exist in the image

cv2.putText(original\_img, 'Both Hands', (250, 56), cv2.FONT\_HERSHEY\_COMPLEX, 0.8, (0, 255, 0), 2)

else: # if only one hand exists in the image

for i in results.multi\_handedness:

label = MessageToDict(i)['classification'][0]['label']

if label == 'Left':

cv2.putText(original\_img, f'{label} Hand', (20, 56), cv2.FONT\_HERSHEY\_COMPLEX, 0.8, (0, 255, 0), 2)

if label == 'Right':

cv2.putText(original\_img, f'{label} Hand', (460, 56), cv2.FONT\_HERSHEY\_COMPLEX, 0.8, (0, 255, 0), 2)

cv2.imshow('image', original\_img)

if cv2.waitKey(1) & 0xff == ord('q'):

break

webcam.release()

cv2.destroyAllWindows()