

















(43) Viruman - Kanja Poovu. colab.research.google.com/drive/1YqFSjC8SJd5JRxzuBBBTEASq3FbjZIEc#scrollTo=3FKKAAu9KLUQ&uniquifier=1

pose_estimation.ipynb

File Edit View Insert Runtime Tools Help Save failed

Files

Double-click (or enter) to edit

{x} sample_data Caption Cool Dhoni's Helicopter Shot...

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[2] !pip install mediapipe #install library for dependency

[2] from google.colab.patches import cv2_imshow # to patch the imshow bug of google

[3] #import packages
import cv2
import mediapipe as mp
import numpy as np

initialize mediapipe pose solution
mp_pose = mp.solutions.pose
mp_drawing = mp.solutions.drawing_utils
pose = mp_pose.Pose()

take video input for pose detection
you can put here video of your choice
cap = cv2.VideoCapture('/content/Caption Cool Dhoni's Helicopter Shot Collections - Indian Cricket Team, CSK IPL Team _ #KachaBadam (1).mp4')
#cap = cv2.VideoCapture('/content/Dinesh Karthik hits 22 runs off Rubel Hossain - 19th over of Nidahas Trophy Final.mp4')

take live camera input for pose detection
cap = cv2.VideoCapture(0)

read each frame/image from capture object
while True:
 ret, img = cap.read()

Disk 70.66 GB available

5m 55s completed at 19:30

The screenshot shows a Google Colab notebook titled "pose_estimation.ipynb". The code in the notebook is as follows:

```
#import packages
import cv2
import mediapipe as mp
import numpy as np

# initialize mediapipe pose solution
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# take live camera input for pose detection
# cap = cv2.VideoCapture(0)

# read each frame/image from capture object
while True:
    ret, img = cap.read()
    # resize image/frame so we can accommodate it on our screen
    img = cv2.resize(img, (600, 400))

    # do Pose detection
    results = pose.process(img)
    # draw the detected pose on original video/ live stream
    mp_draw.draw_landmarks(img, results.pose_landmarks, mp_pose.POSE_CONNECTIONS,
                           mp_draw.DrawingSpec((255, 0, 0), 2, 2),
                           mp_draw.DrawingSpec((255, 0, 255), 2, 2)
                           )
    #Display pose on original video/live stream
    cv2.imshow('Frame', img)

    if cv2.waitKey(1) & 0xFF == ord('q'):
        break
```

The notebook has a runtime configuration with "RAM" set to 16GB and "Disk" set to 70.66 GB available. The status bar at the bottom indicates a runtime of 5m 55s completed at 19:30 on 21-09-2022.

The screenshot shows a Google Colab notebook titled "pose_estimation.ipynb". The code cell contains the following Python script:

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                           mp_draw.DrawingSpec((255, 0, 0), 2, 2),
                           mp_draw.DrawingSpec((255, 0, 255), 2, 2)
                           )
    #Display pose on original video/live stream
    #cv2.imshow(img)

    # Extract and draw pose on plain white image
    h, w, c = img.shape # get shape of original frame
    opImg = np.zeros([h, w, c]) # create blank image with original frame size
    opImg.fill(255) # set white background. put 0 if you want to make it black

    # draw extracted pose on black white image
    mp_draw.draw_landmarks(opImg, results.pose_landmarks, mp_pose.POSE_CONNECTIONS,
                           mp_draw.DrawingSpec((255, 0, 0), 2, 2),
                           mp_draw.DrawingSpec((255, 0, 255), 2, 2)
                           )

    if(results.pose_landmarks != None):
        cv2.imshow(img)
        cv2.imshow(opImg)
        # print all landmarks
        print(results.pose_landmarks)

    cv2.waitKey(1)
```

The notebook interface includes a file browser on the left, a toolbar with various icons at the top, and a sidebar on the right with language and history settings. A progress bar at the bottom indicates the cell completed at 19:30.