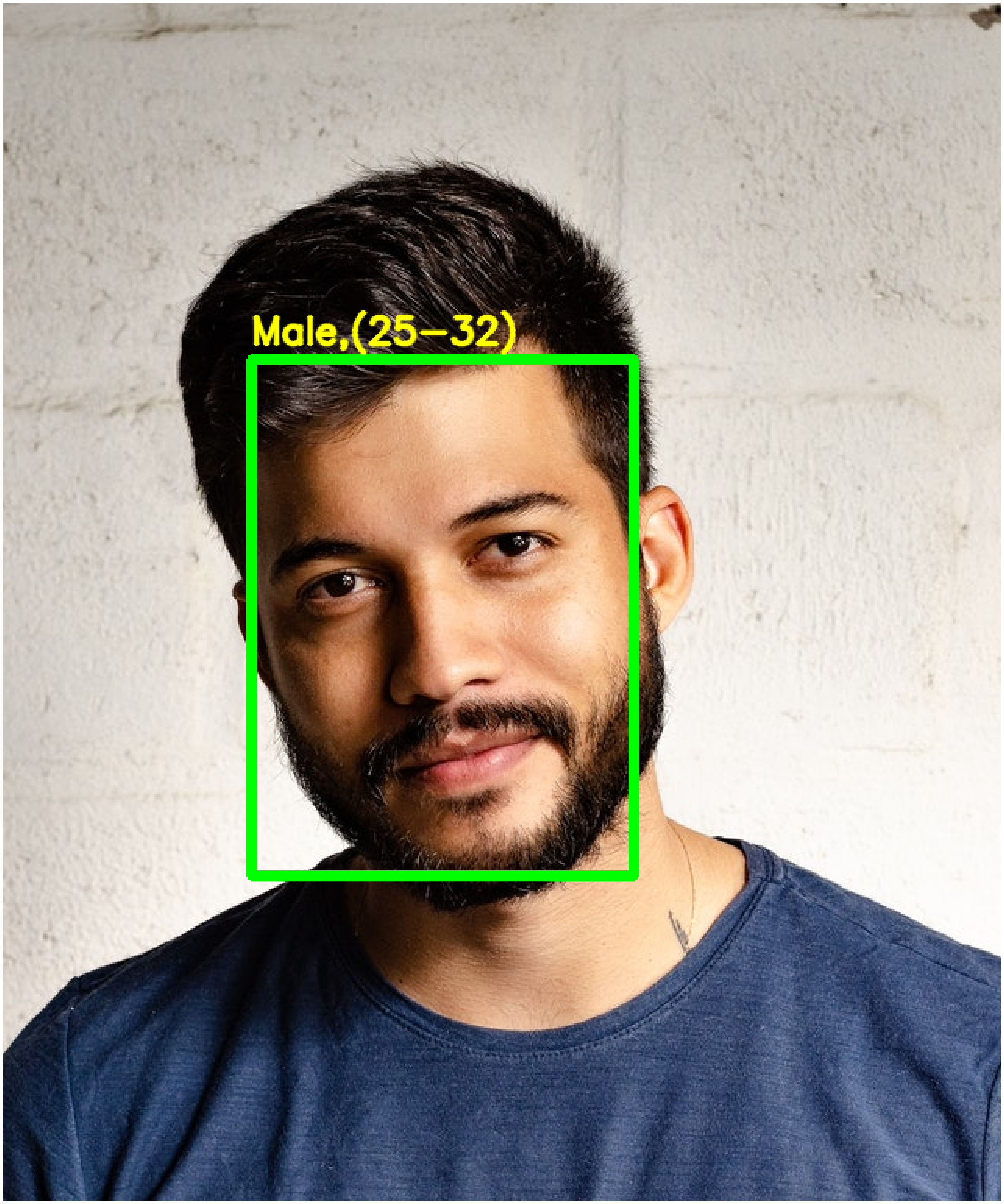
```
!git clone https://github.com/misbah4064/age_and_gender_detection.git
%cd age_and_gender_detection
```

```
     Cloning into 'age_and_gender_detection'...
     remote: Enumerating objects: 11, done.
     remote: Counting objects: 100% (11/11), done.
     remote: Compressing objects: 100% (10/10), done.
     remote: Total 11 (delta 1), reused 0 (delta 0), pack-reused 0
     Unpacking objects: 100% (11/11), done.
     /content/age_and_gender_detection
```

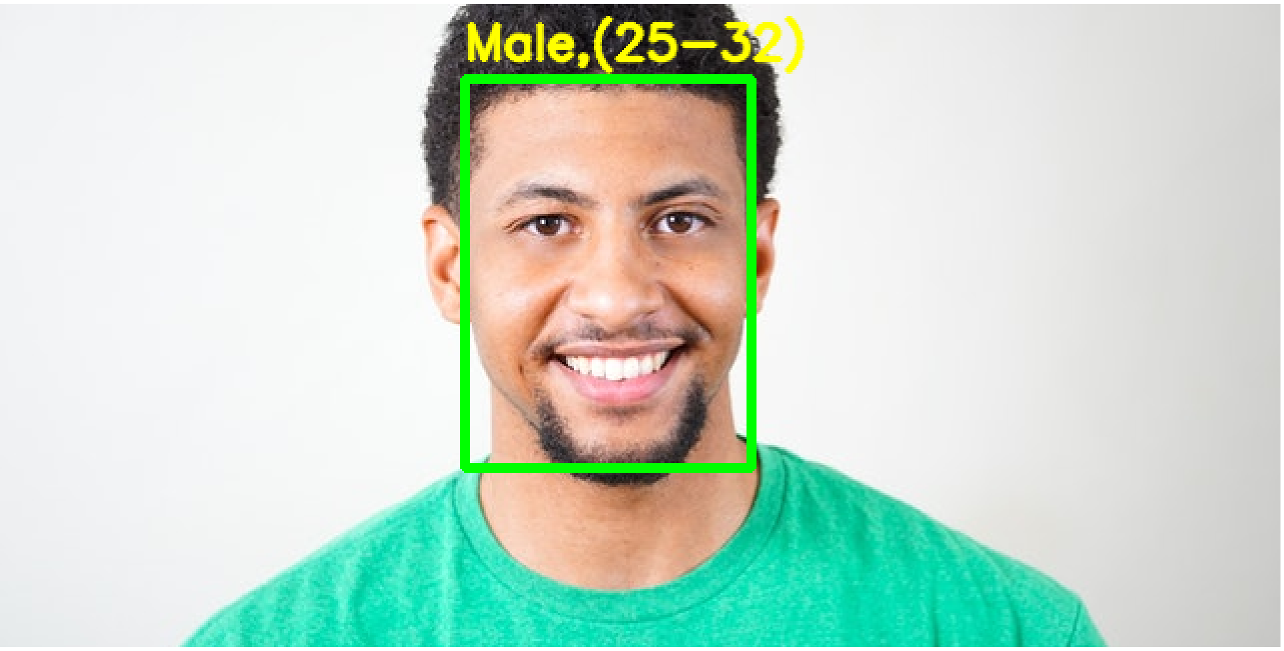
```
# Downloading pretrained data and unzipping it
!gdown https://drive.google.com/uc?id=1_aDScOvBeBLCn_iv0oxSO8X1ySQpSbIS
# https://drive.google.com/uc?id=1_aDScOvBeBLCn_iv0oxSO8X1ySQpSbIS
!unzip modelNweight.zip
```

```
     Downloading...
     From: https://drive.google.com/uc?id=1_aDScOvBeBLCn_iv0oxSO8X1ySQpSbIS
     To: /content/age_and_gender_detection/modelNweight.zip
     86.2MB [00:00, 151MB/s]
     Archive:  modelNweight.zip
        creating: modelNweight/
       inflating: modelNweight/age_deploy.prototxt
       inflating: modelNweight/age_net.caffemodel
       inflating: modelNweight/gender_deploy.prototxt
       inflating: modelNweight/gender_net.caffemodel
       inflating: modelNweight/opencv_face_detector.pbtxt
       inflating: modelNweight/opencv_face_detector_uint8.pb
```

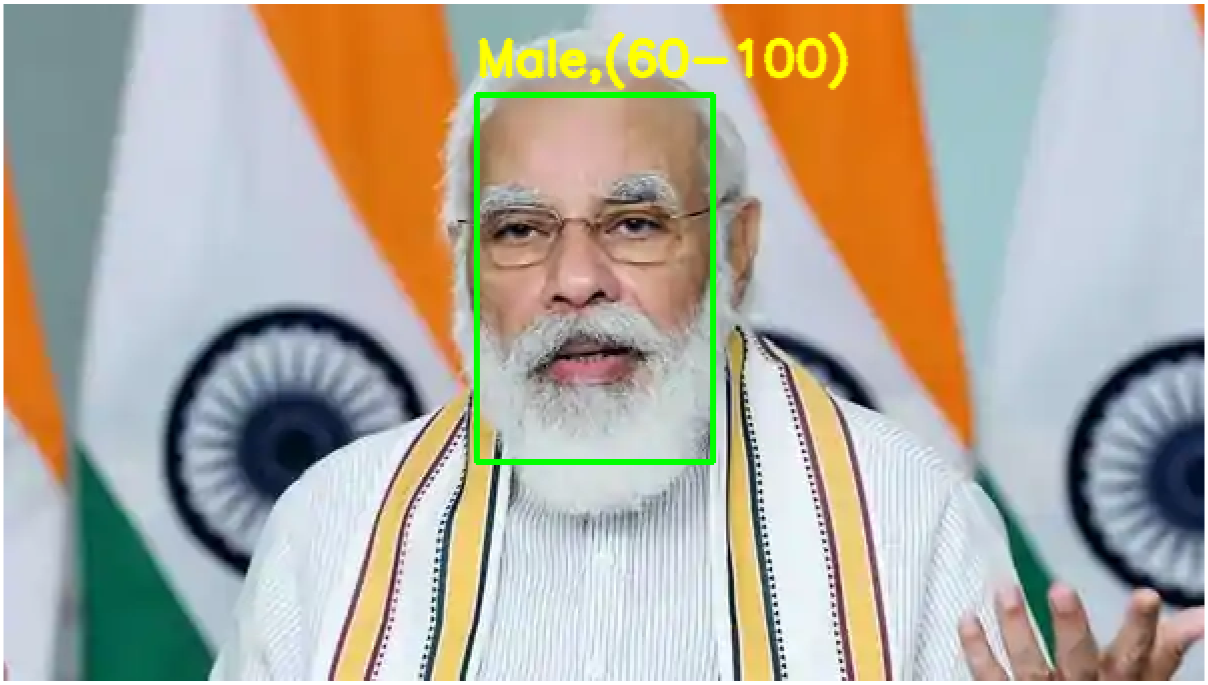
```
# Import required modules
import cv2 as cv
import math
import time
from google.colab.patches import cv2_imshow

def getFaceBox(net, frame, conf_threshold=0.7):
    frameOpencvDnn = frame.copy()
    frameHeight = frameOpencvDnn.shape[0]
    frameWidth = frameOpencvDnn.shape[1]
    blob = cv.dnn.blobFromImage(frameOpencvDnn, 1.0, (300, 300), [104, 117, 123], T

    net.setInput(blob)
    detections = net.forward()
    bboxes = []
    for i in range(detections.shape[2]):
        confidence = detections[0, 0, i, 2]
        if confidence > conf_threshold:
            x1 = int(detections[0, 0, i, 3] * frameWidth)
            y1 = int(detections[0, 0, i, 4] * frameHeight)
            x2 = int(detections[0, 0, i, 5] * frameWidth)
            y2 = int(detections[0, 0, i, 6] * frameHeight)
            y2 = int(detections[0, 0, i, 6] * frameHeight)
            bboxes.append([x1, y1, x2, y2])
            cv.rectangle(frameOpencvDnn, (x1, y1), (x2, y2), (0, 255, 0), int(round
    return frameOpencvDnn, bboxes

faceProto = "modelNweight/opencv_face_detector.pbtxt"
faceModel = "modelNweight/opencv_face_detector_uint8.pb"

ageProto = "modelNweight/age_deploy.prototxt"
ageModel = "modelNweight/age_net.caffemodel"

genderProto = "modelNweight/gender_deploy.prototxt"
genderModel = "modelNweight/gender_net.caffemodel"

MODEL_MEAN_VALUES = (78.4263377603, 87.7689143744, 114.895847746)
ageList = ['(0-2)', '(4-6)', '(8-12)', '(15-20)', '(25-32)', '(38-43)', '(48-53)',
genderList = ['Male', 'Female']

# Load network
ageNet = cv.dnn.readNet(ageModel, ageProto)
genderNet = cv.dnn.readNet(genderModel, genderProto)
faceNet = cv.dnn.readNet(faceModel, faceProto)

padding = 20

def age_gender_detector(frame):
    # Read frame
    t = time.time()
    frameFace, bboxes = getFaceBox(faceNet, frame)
    for bbox in bboxes:
        # print(bbox)
        face = frame[max(0,bbox[1]-padding):min(bbox[3]+padding,frame.shape[0]-1),m

        blob = cv.dnn.blobFromImage(face, 1.0, (227, 227), MODEL_MEAN_VALUES, swapR
        genderNet.setInput(blob)
        genderPreds = genderNet.forward()
        gender = genderList[genderPreds[0].argmax()]
        ageNet.setInput(blob)
        agePreds = ageNet.forward()
        age = ageList[agePreds[0].argmax()]

        label = "{},{}".format(gender, age)
        cv.putText(frameFace, label, (bbox[0], bbox[1]-10), cv.FONT_HERSHEY_SIMPLEX
    return frameFace


input = cv.imread("image.jpg")
output = age_gender_detector(input)
cv2_imshow(output)
```



```
input = cv.imread("image1.jpg")
output = age_gender_detector(input)
cv2_imshow(output)
```



```
input = cv.imread("image2.jpg")
output = age_gender_detector(input)
cv2_imshow(output)
```



```
import cv2
cap = cv2.VideoCapture('video.mp4')
ret, frame = cap.read()
frame_height, frame_width, _ = frame.shape
out = cv2.VideoWriter('output.avi',cv2.VideoWriter_fourcc('M','J','P','G'), 10, (frame_width,
print("Processing Video...")
while cap.isOpened():
  ret, frame = cap.read()
  if not ret:
    out.release()
    break
  output = age_gender_detector(frame)
  out.write(output)
out.release()
print("Done processing video")
```