Detect face from live video then blur human face by using open cv

First we can know about some terms here

**What is Opencv?**

OpenCV is a tool used in machine learning through which we can process any image for analysis also helpful to used in computer vision use cases. OpenCV is an open source library that can used to perform task like face detection, object tracking etc

We can simply get it from pip

Command :

Pip install opencv-python

**What is the Haar Cascade Classifier?**

Haar Cascade classifier is used for object detection from the video. It is algorithm used for identify image on a real-time video.

 learning approach for visual object detection which is able to process images very quickly and achieve high detection rates.

## Face Detection with Haar Cascade Classifier -

OpenCV uses Haar Feature-based Cascade Classifiers and comes with pre-trained XML files of various Haar Cascades. and Face detection with Haar Cascades algorithm needs a lot of positive images and negative images to train the classifier. The model created from this training is available in the OpenCV [GitHub](https://github.com/opencv/opencv/blob/master/data/haarcascades/haarcascade_frontalface_default.xml) repository

Now start writing the code.

Sets the video source to the default webcam, which OpenCV can easily capture

cap = cv2.VideoCapture(0)

read() # To capture the video in frames for video source

while True:  
ret, img = cap.read() # The actual video frame read (one frame on each loop)

command:

detectMultiScale() #function to detect the faces of the video.

face = model.detectMultiScale(img)

Now, we will find the coordinates in our video. We use these coordinates to blur the face in our video.

x1 = face[0][0]  
y1 = face[0][1]  
x2 = face[0][2] + x1  
y2 = face[0][3] + y1   
cimg = img[y1:y2 , x1:x2]  
blur\_img = cv2.blur(cimg, (50,50))  
img[y1:y2 , x1:x2] = blur\_img

Now, we will show the video using the imshow() function and cv2 waitkey() allows you to wait for a specific time in milliseconds until you press “enter” on the keyword and destroyAllWindows() simply destroys all the windows we created.

cv2.imshow(“Blurred Face”,img)  
if cv2.waitKey(100) == 13:  
break  
cv2.destroyAllWindows()

Github Link: