**Practical Assignment**

**Objective: - Blur the Face**

Blurring the face area of people from videos is done in all news channels and to hide the identity of a person.

With computer vision, You can automatically detect the face region of the person and use it to blur the image.

The project will be useful in blurring the faces of the people in the video.

**Dataset Link: -**

Use anyone of your choice.

**Task: -** Create a Desktop App where the user can upload an video and the faces will be blurred.

**Deployment: -** Any Free Platform(Try to look out for free options.)

**Assignment Submission: -** Only submit the hosted app link. OR GitHub Link

# Importing libraries

import numpy as np

import cv2

import matplotlib.pyplot as plt

# A function for plotting the images

def plotImages(img):

    plt.imshow(img, cmap="gray")

    plt.axis('off')

    plt.style.use('seaborn')

    plt.show()

# Reading an image using OpenCV

# OpenCV reads images by default in BGR format

image = cv2.imread('my\_img.jpg')

# Converting BGR image into a RGB image

image = cv2.cvtColor(image, cv2.COLOR\_BGR2RGB)

# plotting the original image

plotImages(image)

face\_detect = cv2.CascadeClassifier('haarcascade\_frontalface\_alt.xml')

face\_data = face\_detect.detectMultiScale(image, 1.3, 5)

# Draw rectangle around the faces which is our region of interest (ROI)

for (x, y, w, h) in face\_data:

    cv2.rectangle(image, (x, y), (x + w, y + h), (0, 255, 0), 2)

    roi = image[y:y+h, x:x+w]

    # applying a gaussian blur over this new rectangle area

    roi = cv2.GaussianBlur(roi, (23, 23), 30)

    # impose this blurred image on original image to get final image

    image[y:y+roi.shape[0], x:x+roi.shape[1]] = roi

# Display the output

plotImages(image)