FUNDAMENTAL IMAGE PROCESSING TECHNIQUES

MIDTERM PROJECT

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1. Introduction:

In the image/video processing project(s) as named *'Face recognition'*, the first step is generally face detection. What if we think the opposite? What if we want to anonymize the face by blurring it? Thus, making it is difficult to identify the face?

Practical applications of face blurring and anonymization include:

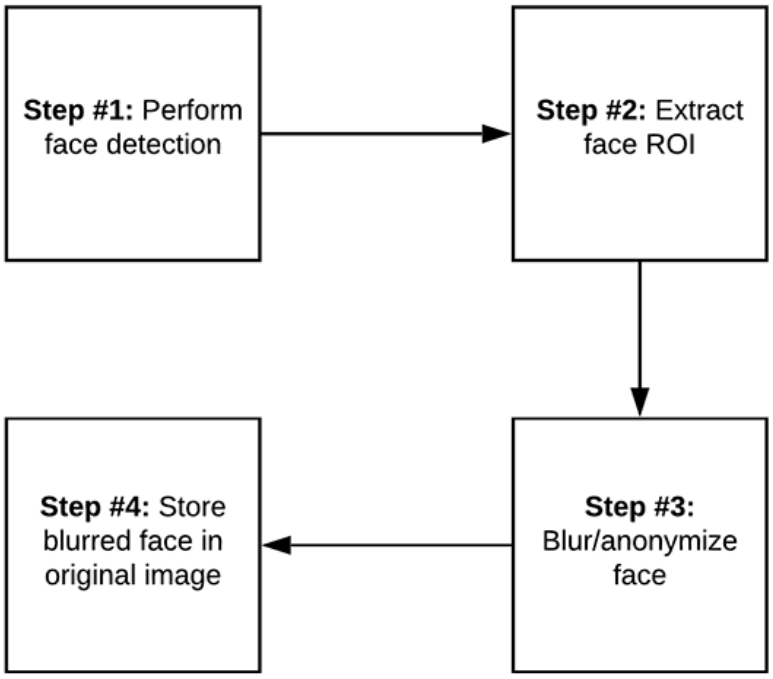
- Privacy and identity protection in public or private areas
- Protecting personal information(like face) online
- Photojournalism and news reporting(e.g. blur face of people who did not give a permission)
- Dataset curation and distribution(e.g. anonymize individuals in dataset)
  … and more stuffs!

2. Process:

In the first part of our project is a method that has four-step to blur faces with 'OpenCV' and 'Python'. We have used Gaussian blur to anonymize faces in images. Also, we will use it for videos in the final project.

How can it be possible?

We use a method that has 4-steps to perform face blurring and anonymization.



3. Sample Output

In the output image, the left part is original, and the right part is an image with blurred face.

The face does not belong to a real person in this example. This is a portrait drawing. Even so, our algorithm can blur the face.

This is a sample with multiple faces and the algorithm can blur all of them.