
a short report on

Image Seprator

created by

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The following project is a command line interface with no GUI, designed and developed by me to test my computer vision skills. The following code separates the images in a dataset on the basis of whether it's a group photo or a solo or features no face at all.

LIBRARIES USED

The following libraries are used:

- cv2
- sys
- os
- shutil

METHODOLOGY

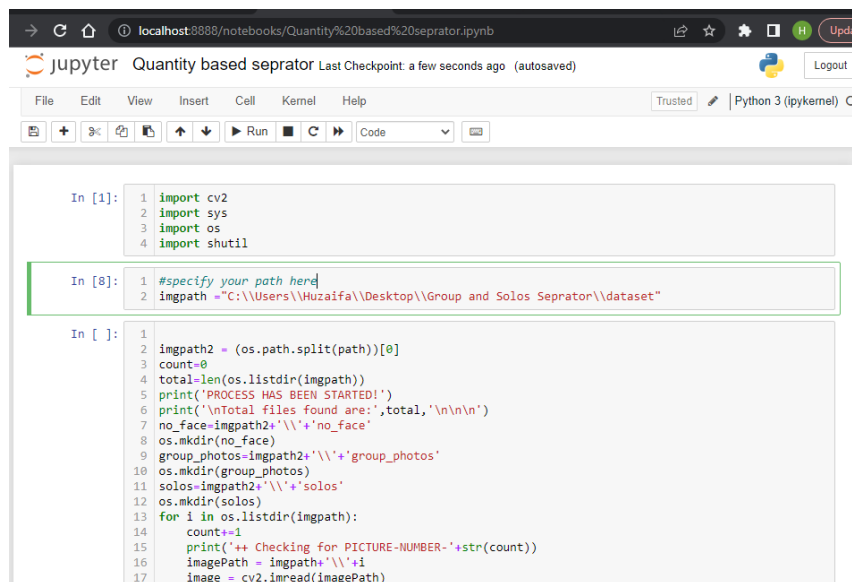
The user specifies the path to his dataset in this cell;

```
3 import os
4 import shutil

In [8]: 1 imgpath = "C:\\Users\\Huzaifa\\Desktop\\Group and Solos Seprator\\dataset"

In [9]: 1
        2 imgpath2 = (os.path.split(path))[0]
        3 count=0
```

The following code runs by iterating through each picture and checking how many faces that image contains. If the image detect one face only then it's considered as a solo picture, it multiple i.e. more than one picture is detected than that image will be considered as a group photo. The library cv2 is used for detecting faces inside the image. In each folder a separated and a squared folder is also made.



```
→ localhost:8888/notebooks/Quantity%20based%20seprator.ipynb
jupyter Quantity based seprator Last Checkpoint: a few seconds ago (autosaved) Logout

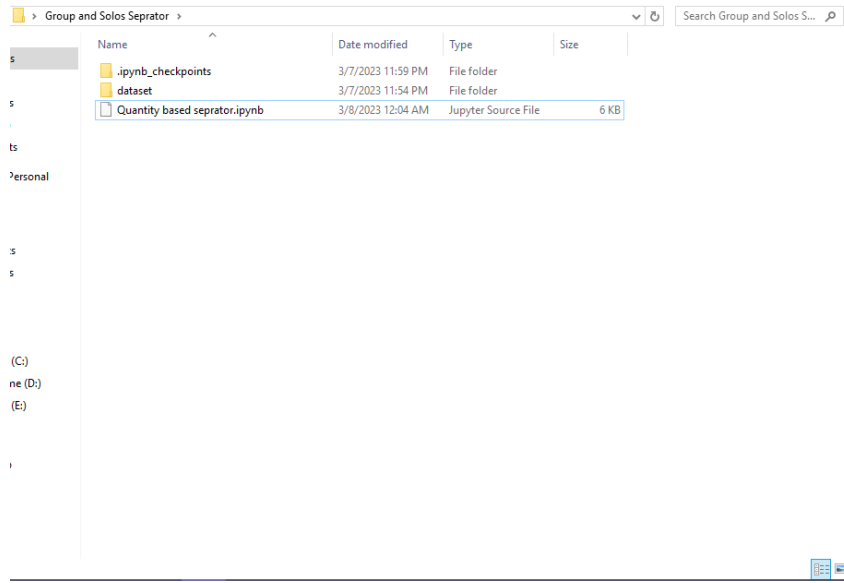
File Edit View Insert Cell Kernel Help Trusted Python 3 (ipykernel)

In [1]: 1 import cv2
        2 import sys
        3 import os
        4 import shutil

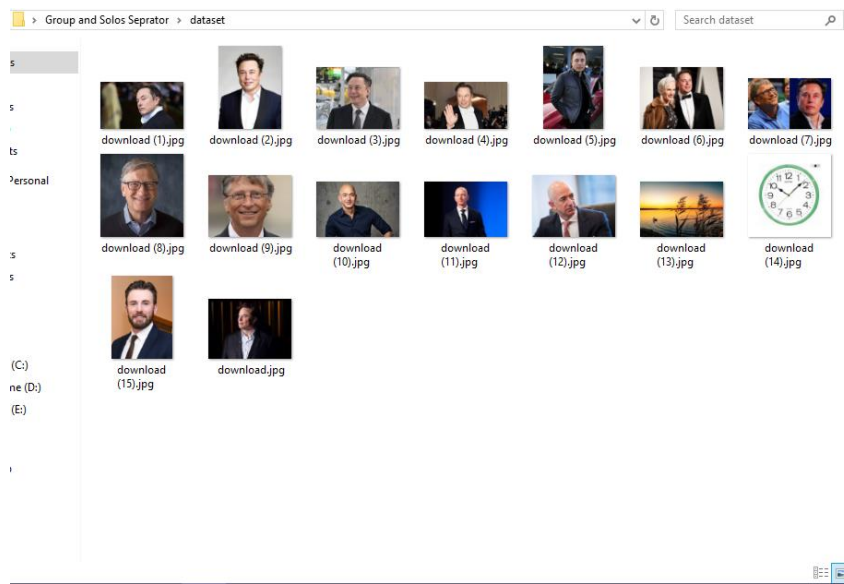
In [8]: 1 #specify your path here
        2 imgpath = "C:\\Users\\Huzaifa\\Desktop\\Group and Solos Seprator\\dataset"

In [ ]: 1
        2 imgpath2 = (os.path.split(path))[0]
        3 count=0
        4 total=len(os.listdir(imgpath))
        5 print('PROCESS HAS BEEN STARTED!')
        6 print('\nTotal files found are:',total,'\n\n')
        7 no_face=imgpath2+'\\'+no_face'
        8 os.mkdir(no_face)
        9 group_photos=imgpath2+'\\'+group_photos'
       10 os.mkdir(group_photos)
       11 solos=imgpath2+'\\'+solos'
       12 os.mkdir(solos)
       13 for i in os.listdir(imgpath):
       14     count+=1
       15     print('++ Checking for PICTURE-NUMBER-'+str(count))
       16     imagePath = imgpath+'\\'+i
       17     image = cv2.imread(imagePath)
```

Main code



Folder before execution of code



Sample Dataset

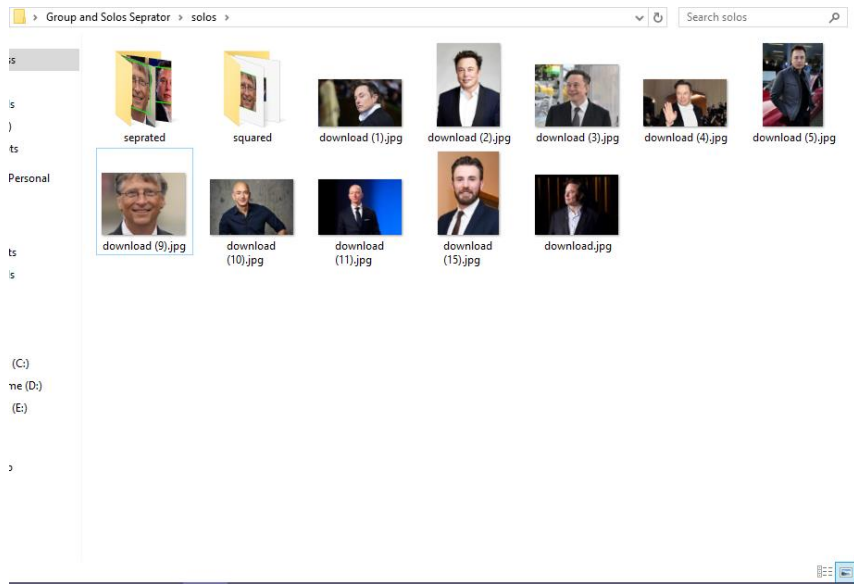
```
jupyter Quantity based seprator Last Checkpoint: a few seconds ago (autosaved) Logout
File Edit View Insert Cell Kernel Help Trusted Python 3 (ipykernel)
PROCESS HAS BEEN STARTED!
Total files found are: 16

++ Checking for PICTURE-NUMBER-1
-- Found 1 Faces.
++ Checking for PICTURE-NUMBER-2
-- Found 1 Faces.
++ Checking for PICTURE-NUMBER-3
-- Found 1 Faces.
++ Checking for PICTURE-NUMBER-4
-- Found 0 Faces.
++ Checking for PICTURE-NUMBER-5
-- Found 0 Faces.
++ Checking for PICTURE-NUMBER-6
-- Found 0 Faces.
++ Checking for PICTURE-NUMBER-7
-- Found 1 Faces.
++ Checking for PICTURE-NUMBER-8
-- Found 1 Faces.
++ Checking for PICTURE-NUMBER-9
-- Found 1 Faces.
++ Checking for PICTURE-NUMBER-10
-- Found 1 Faces.
++ Checking for PICTURE-NUMBER-11
-- Found 1 Faces.
++ Checking for PICTURE-NUMBER-12
-- Found 2 Faces.
++ Checking for PICTURE-NUMBER-13
-- Found 1 Faces.
```

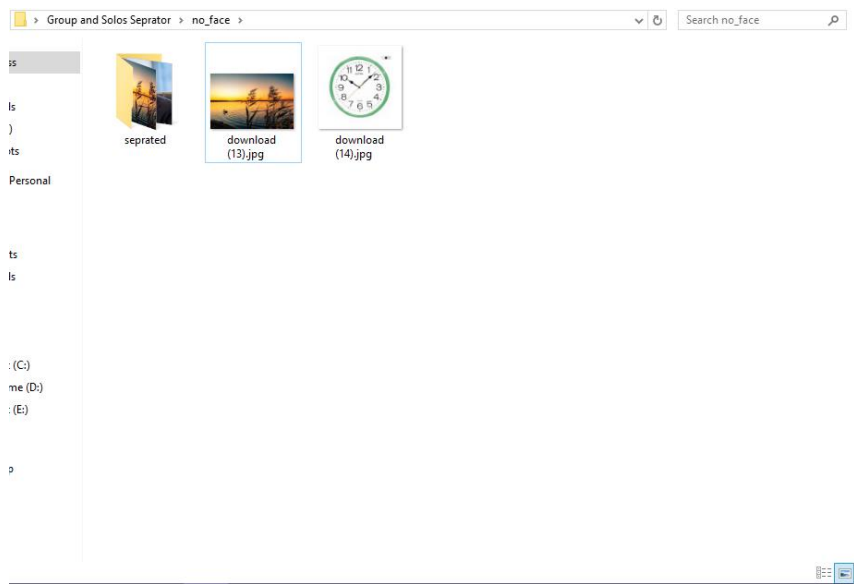
Program being executed

Group and Solos Seprator					Search Group and Solos S...
	Name	Date modified	Type	Size	
ss	.ipynb_checkpoints	3/7/2023 11:59 PM	File folder		
js	dataset	3/7/2023 11:54 PM	File folder		
)	group_photos	3/8/2023 12:04 AM	File folder		
ts	no_face	3/8/2023 12:04 AM	File folder		
Personal	solos	3/8/2023 12:04 AM	File folder		
	Quantity based seprator.ipynb	3/8/2023 12:04 AM	Jupyter Source File	6 KB	
its					
js					
(C:)					
me (D:)					
(E:)					
p					

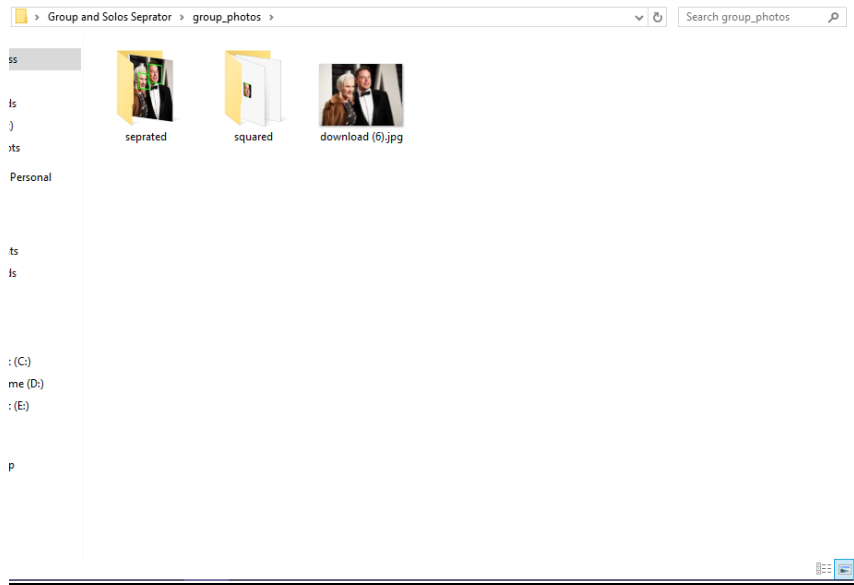
Folder after execution new folders are created



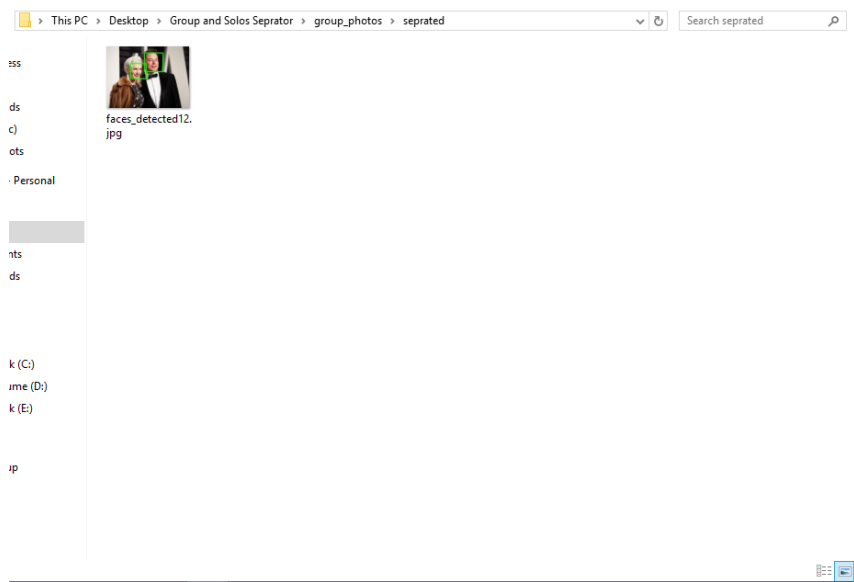
Solos folder



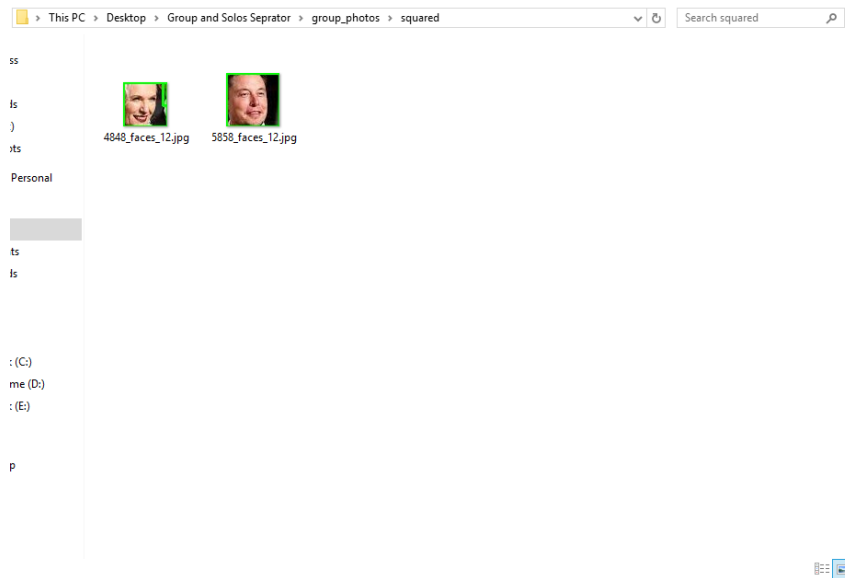
No face folder



Group photos folder



Seprated folder



Squared

LIMITATIONS

The accuracy of the code depends solely on the ability of cv2 library to detect the correct faces. The cv2 library may produce different or inaccurate results on different dataset or images.