

In [1]: `!pip install easyocr`

```
Requirement already satisfied: easyocr in c:\users\bhavani\anaconda3\lib\site-packages (1.4.1)
Requirement already satisfied: Pillow<8.3.0 in c:\users\bhavani\anaconda3\lib\site-packages (from easyocr) (7.0.0)
Requirement already satisfied: torch in c:\users\bhavani\anaconda3\lib\site-packages (from easyocr) (1.9.0)
Requirement already satisfied: numpy in c:\users\bhavani\anaconda3\lib\site-packages (from easyocr) (1.19.5)
Requirement already satisfied: PyYAML in c:\users\bhavani\anaconda3\lib\site-packages (from easyocr) (5.4.1)
Requirement already satisfied: torchvision>=0.5 in c:\users\bhavani\anaconda3\lib\site-packages (from easyocr) (0.10.0)
Requirement already satisfied: opencv-python-headless in c:\users\bhavani\anaconda3\lib\site-packages (from easyocr) (4.5.5.62)
Requirement already satisfied: scipy in c:\users\bhavani\anaconda3\lib\site-packages (from easyocr) (1.4.1)
Requirement already satisfied: scikit-image in c:\users\bhavani\anaconda3\lib\site-packages (from easyocr) (0.18.1)
Requirement already satisfied: python-bidi in c:\users\bhavani\anaconda3\lib\site-packages (from easyocr) (0.4.2)
Requirement already satisfied: typing-extensions in c:\users\bhavani\anaconda3\lib\site-packages (from torch->easyocr) (3.7.4.3)
Requirement already satisfied: six in c:\users\bhavani\anaconda3\lib\site-packages (from python-bidi->easyocr) (1.15.0)
Requirement already satisfied: matplotlib!=3.0.0,>=2.0.0 in c:\users\bhavani\anaconda3\lib\site-packages (from scikit-image->easyocr) (3.3.2)
Requirement already satisfied: networkx>=2.0 in c:\users\bhavani\anaconda3\lib\site-packages (from scikit-image->easyocr) (2.5)
Requirement already satisfied: imageio>=2.3.0 in c:\users\bhavani\anaconda3\lib\site-packages (from scikit-image->easyocr) (2.9.0)
Requirement already satisfied: tifffile>=2019.7.26 in c:\users\bhavani\anaconda3\lib\site-packages (from scikit-image->easyocr) (2021.4.8)
Requirement already satisfied: PyWavelets>=1.1.1 in c:\users\bhavani\anaconda3\lib\site-packages (from scikit-image->easyocr) (1.1.1)
Requirement already satisfied: pyparsing!=2.0.4,!2.1.2,!2.1.6,>=2.0.3 in c:\users\bhavani\anaconda3\lib\site-packages (from matplotlib!=3.0.0,>=2.0.0->scikit-image->easyocr) (2.4.7)
Requirement already satisfied: certifi>=2020.06.20 in c:\users\bhavani\appdata\roaming\python\python38\site-packages (from matplotlib!=3.0.0,>=2.0.0->scikit-image->easyocr) (2021.10.8)
Requirement already satisfied: python-dateutil>=2.1 in c:\users\bhavani\anaconda3\lib\site-packages (from matplotlib!=3.0.0,>=2.0.0->scikit-image->easyocr) (2.8.1)
Requirement already satisfied: cycler>=0.10 in c:\users\bhavani\anaconda3\lib\site-packages (from matplotlib!=3.0.0,>=2.0.0->scikit-image->easyocr) (0.10.0)
Requirement already satisfied: kiwisolver>=1.0.1 in c:\users\bhavani\anaconda3\lib\site-packages (from matplotlib!=3.0.0,>=2.0.0->scikit-image->easyocr) (1.3.1)
Requirement already satisfied: decorator>=4.3.0 in c:\users\bhavani\anaconda3\lib\site-packages (from networkx>=2.0->scikit-image->easyocr) (4.4.2)
```

In [2]: `import easyocr
import cv2`

```
C:\Users\BHAVANI\anaconda3\lib\site-packages\skimage\io\manage_plugins.py:23: UserWarning: Your installed pillow version is < 7.1.0. Several security issues (CVE-2020-11538, CVE-2020-10379, CVE-2020-10994, CVE-2020-10177) have been fixed in pillow 7.1.0 or higher. We recommend to upgrade this library.
  from .collection import imread_collection_wrapper
```

In [3]: `reader = easyocr.Reader(['hi','en'], gpu=False)`

Using CPU. Note: This module is much faster with a GPU.


In [4]: `img = cv2.imread('1.jpg')`

In [5]: `results = reader.readtext(img, detail = 1, paragraph = False)`

```
C:\Users\BHAVANI\anaconda3\lib\site-packages\torch\nn\functional.py:718: UserWarning: Named tensors and all their associated APIs are an experimental feature and subject to change. Please do not use them for anything important until they are released as stable. (Triggered internally at ..\c10\core\TensorImpl.h:1156.)
  return torch.max_pool2d(input, kernel_size, stride, padding, dilation, ceil_mode)
```

In [6]:  results


```
Out[6]: [[([181, 3], [881, 3], [881, 165], [181, 165]),
          'Good Morning!',
          0.6508577363343007),
         ([189, 138], [855, 138], [855, 225], [189, 225]),
          'Wake uD and smile like the',
          0.5873561248159627),
         ([343, 251], [672, 251], [672, 335], [343, 335]),
          'morning sur',
          0.49621353329714335]]
```

```
In [7]:  for(bbox, text, prob) in results:
        (tl,tr,br,b1) = bbox
        tl = (int(tl[0]), int(tl[1]))
        tr = (int(tr[0]), int(tr[1]))
        br = (int(br[0]), int(br[1]))
        b1 = (int(b1[0]), int(b1[1]))
        #text = "".join([c if ord(c) < 128 else "" for c in text]).strip()

        cv2.rectangle(img, tl,br,(0,255,0),2)
        cv2.putText(img, text, (tl[0],tl[1] -10),
                     cv2.FONT_HERSHEY_SIMPLEX,0.8,(0,255,0), 2)

#cv2.imshow("Image", img)
cv2.waitKey(0)
```

Out[7]: -1

```
In [8]:  import cv2
import glob
import pandas as pd

path = "C:\\Users\\BHAVANI\\Documents\\computer vision projects\\text extraction from images\\*.j
img_number = 1
reader = easyocr.Reader(['en'])

df = pd.DataFrame()
for file in glob.glob(path):
    print(file)
    img = cv2.imread(file,0)
    results = reader.readtext(img, detail = 0, paragraph = True)
    df = df.append(pd.DataFrame({'image': file, 'detected_text': results[0]}, index = [0]), ignore
img_number+=1
```

CUDA not available - defaulting to CPU. Note: This module is much faster with a GPU.

C:\Users\BHAVANI\Documents\computer vision projects\text extraction from images\1.jpg

<ipython-input-8-3d0dbd21f93a>:14: FutureWarning: The frame.append method is deprecated and will be removed from pandas in a future version. Use pandas.concat instead.

df = df.append(pd.DataFrame({'image': file, 'detected_text': results[0]}, index = [0]), ignore_index=True)

C:\Users\BHAVANI\Documents\computer vision projects\text extraction from images\bill.jpg

<ipython-input-8-3d0dbd21f93a>:14: FutureWarning: The frame.append method is deprecated and will be removed from pandas in a future version. Use pandas.concat instead.

df = df.append(pd.DataFrame({'image': file, 'detected_text': results[0]}, index = [0]), ignore_index=True)

C:\Users\BHAVANI\Documents\computer vision projects\text extraction from images\hindi1.jpg

<ipython-input-8-3d0dbd21f93a>:14: FutureWarning: The frame.append method is deprecated and will be removed from pandas in a future version. Use pandas.concat instead.

df = df.append(pd.DataFrame({'image': file, 'detected_text': results[0]}, index = [0]), ignore_index=True)

C:\Users\BHAVANI\Documents\computer vision projects\text extraction from images\maxresdefault.jpg

<ipython-input-8-3d0dbd21f93a>:14: FutureWarning: The frame.append method is deprecated and will be removed from pandas in a future version. Use pandas.concat instead.

df = df.append(pd.DataFrame({'image': file, 'detected_text': results[0]}, index = [0]), ignore_index=True)

In [9]:

df

Out[9]:

	image	detected_text
0	C:\Users\BHAVANI\Documents\computer vision pro...	Good Morning! Wake up andsmile like the mornin...
1	C:\Users\BHAVANI\Documents\computer vision pro...	0
2	C:\Users\BHAVANI\Documents\computer vision pro...	selected by 'freepik com
3	C:\Users\BHAVANI\Documents\computer vision pro...	#SAYITWITH PEPSI

In [10]:

df.to_csv("out.csv")

In []: