Capstone Project Report

Text Detection In Images

Name: Keshav Anand

Course: AI and ML

(Batch-4)

Duration: 12 months

Problem Statement: Build a model which will find texts in any image.

Prerequisites

What things you need to install the software and how to install them:

Python 3.6 This setup requires that your machine has latest version of python. The following url https://www.python.org/downloads/ can be referred to download python. Once you have python downloaded and installed, you will need to setup PATH variables (if you want to run python program directly, detail instructions are below in how to run software section). To do that check this: https://www.pythoncentral.io/add-python-to-path-python-is-not- recognized-as-an-internal-or-external-command/. Setting up PATH variable is optional as you can also run program without it and more instruction are given below on this topic.

Second and easier option is to download anaconda and use its anaconda prompt to run the commands. To install anaconda check this url https://www.anaconda.com/download/ You will also need to download and install below 3 packages after you install either python or anaconda from the steps above Sklearn (scikit-learn) numpy scipy if you have chosen to install python 3.6 then run below commands in command prompt/terminal to install these packages pip install -U scikit-learn pip install numpy pip install scipy if you have chosen to install anaconda then run below commands in anaconda prompt to install these packages conda install -c scikit-learn conda install -c anaconda numpy conda install -c anaconda scipy

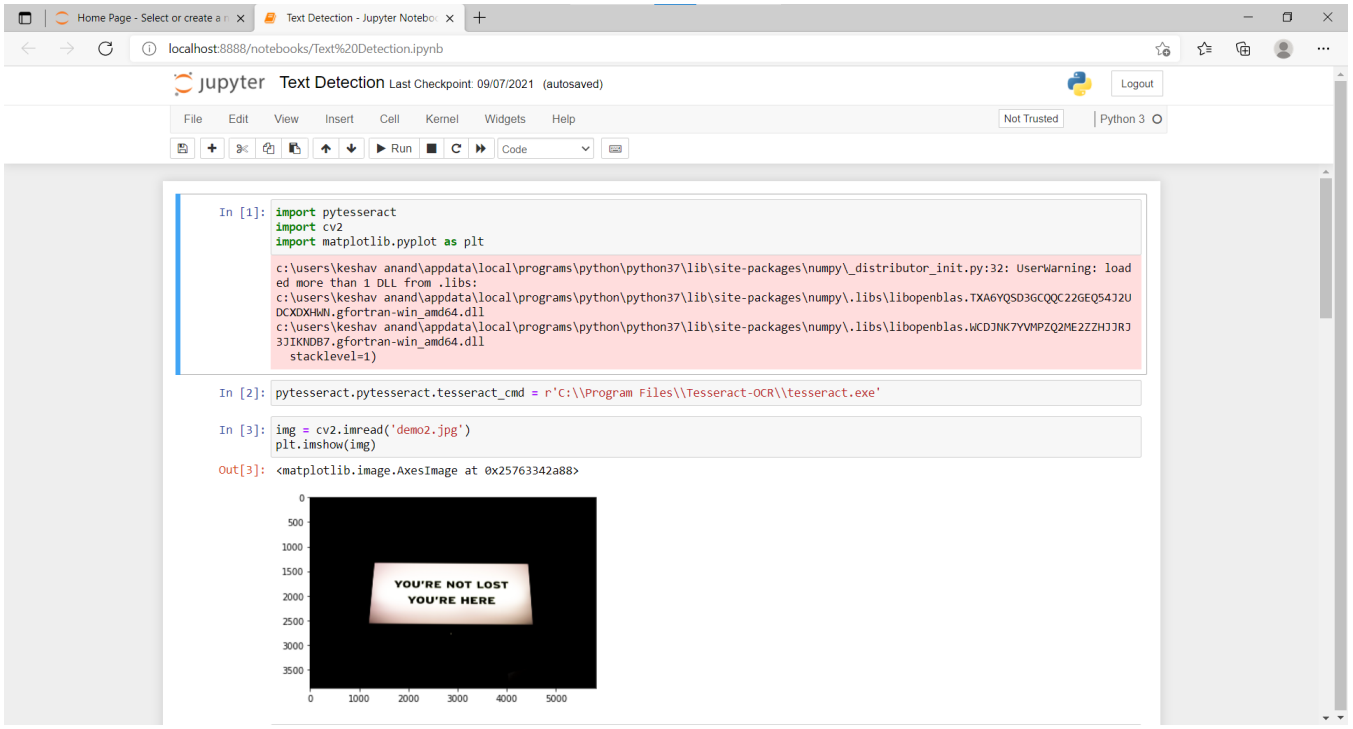
Dataset used :

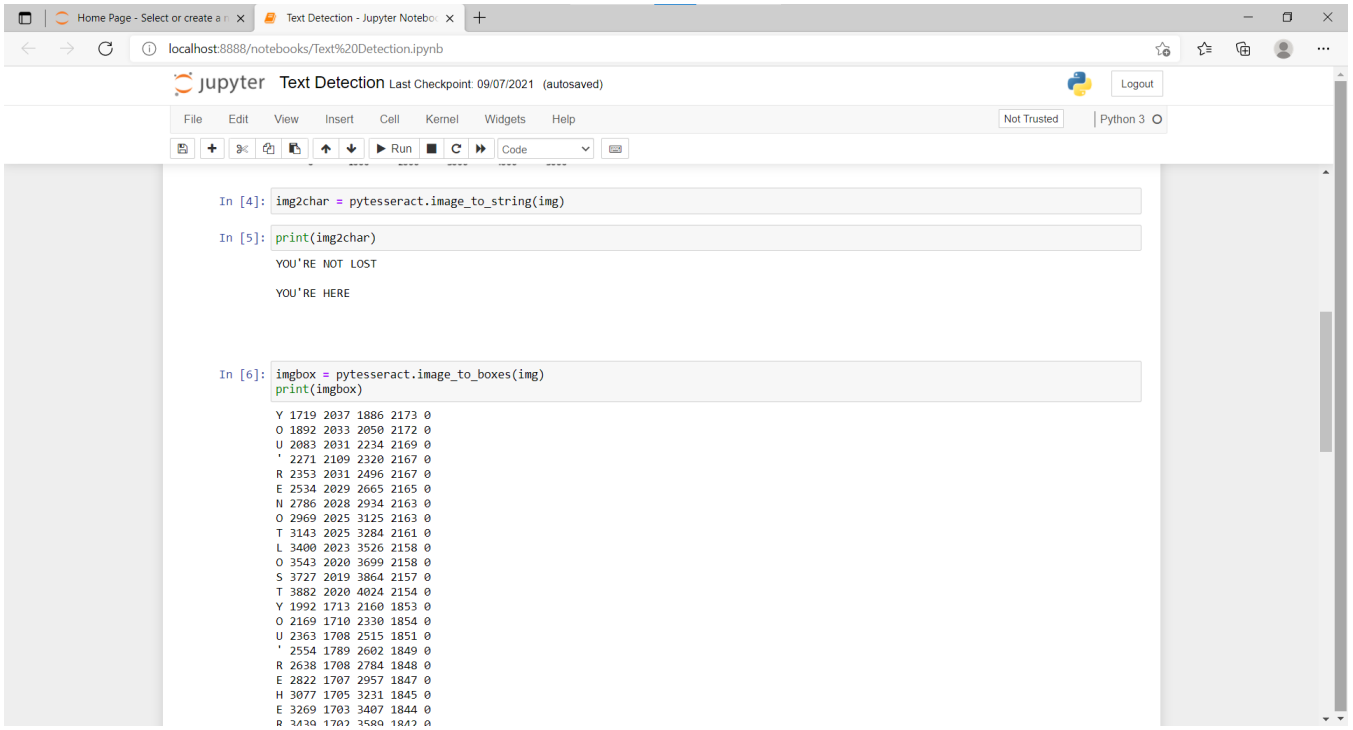
The Image used in this process is a random image downloaded from the internet.

Method used for Detection :

OCR(Optical Character Recognition)

ScreenShots Of Code and Output :





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Run Code

In [7]:
```
type(imgbox)
```
Out[7]: str

In [8]:
```
imgH, imgW,_ = img.shape
```

In [9]:
```
img.shape
```
Out[9]: (3871, 5806, 3)

In [10]:
```
for boxes in imgbox.splitlines():
    boxes = boxes.split(' ')
    x,y,w,h = int(boxes[1]), int(boxes[2]), int(boxes[3]), int(boxes[4])
    cv2.rectangle(img, (x, imgH-y), (w, imgH-h), (0,0,255), 10)
```

In [11]:
```
plt.imshow(img)
```
Out[11]: <matplotlib.image.AxesImage at 0x25766b73b88>

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Run Code

In [11]:
```
plt.imshow(img)
```
Out[11]: <matplotlib.image.AxesImage at 0x25766b73b88>

In [12]:
```
plt.imshow(cv2.cvtColor(img, cv2.COLOR_BGR2RGB))
```
Out[12]: <matplotlib.image.AxesImage at 0x257634c0348>