PROJECT DEVELOPMENT PHASE

PROJECT DEVELOPMENT – DELIVERY OF SPRINT-1

DATE	08- NOVEMBER-2022
TEAM ID	PNT2022TMID00785
PROJECT NAME	REAL-TIME COMMUNICATION SYSTEM POWERED BY AI FOR SPECIALLY ABLED
MAXIMUM MARKS	

IMPORTING NECESSARY LIBRARIES:-

```python
In [1]: import cv2
        import pytesseract
        import os
        from PIL import image
        import sys
```

READING IMAGE WITH DATA FILES:-

```python
In [ ]: def get_string(img_path):
            #read image with opencv
            img=cv2.imread(img_path)
```

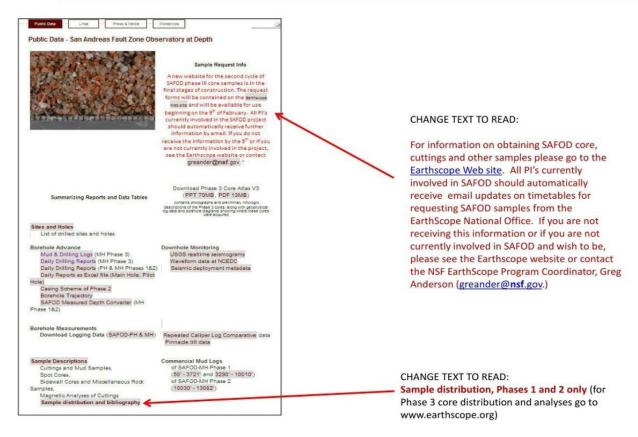## REMOVING NOISE FROM DATASET:-

```python
In [ ]: #convert to gray
        img=cv2.cvtcolor(img,cv2.COLOR_BGR2GRAY)
        #apply dilation & erosion to remove some noise
        kernel=np.ones((1,1),np.unit8)
        img=cv2.dilate(img,kernel,iterations=1)
        img=cv2.erode(image,kernel,iterations=1)
```

RECOGNISING THE DATASET & CHANGING TEXT TO

READ:-

```
In [ ]: #Write the image after apply opencv to do some...
        cv2.imwrite("thres.png",img)
        #recognize text with tesseract for python
        result=pytesseract.image_to_string(image.open("thres.png"))
        os.remove("thres.png")


        return result
```


DISPLAY IMAGES FROM DATASET:-

```
In [ ]: if_name_=='_main_':
    from sys import argv

    if len(argv)<2:
        print("usage python image-to-text.py relative-filepath")
    else:
        print('---start recognize text from image---')
        for i in range(1,len(argv)):
            print(argv[i])
            print(get_string(argv[i]))
                print()
    print()
    print('------Done------')
```

SAMPLE IMAGES:-

Sign_img=cv2.imread(train_data_path+'0/0_234.jpeg')

Display(Text_img,'a')

Sign_img=cv2.imread(train_data_path+'0/0_235.jpeg')

Display(Text_img,'b')

This page was prepared using Microsoft Word
printed then scanned @ 200 DPI

Times New Roman
"The quick brown fox jumps over a lazy dog"
"The quick brown fox jumps over a lazy dog"
"The quick brown fox jumps over a lazy dog"

Arial
"The quick brown fox jumps over a lazy dog"
"The quick brown fox jumps over a lazy dog"
"The quick brown fox jumps over a lazy dog"

The phrase above uses all letters from the alphabet.

FreeOCR notes

1) For best results set your scanner to 300 DPI. 200 DPI is the minimum setting to achieve acceptable results.

2) Use the rotate buttons (to the left of the image) if your image is upside down or rotated

3) If your document has columns or pictures then just select the text area by drawing a box on the image with the left mouse button

4) After OCR you can use the export button to Word or copy/paste the text into any Windows application.

Note: You can press the red X to clear this text window before OCR'ing

Sign_img=cv2.imread(train_data_path+'0/0_236.jpeg')

Display(Text_img,'c')

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Quick OCR | Document

MODERN war means mechanised armies, tanks, aero-planes-thousands of them-and guns, in addition to men and munitions, and to equip and maintain a modern army for defending our homes will cost very large sums of money. Every patriodc Indian can help to make India strong and thus protect Hs home and family by saving as much as possible and lending his savings to Government. The Government of India have issued Defence Loans to suit the convenience of different classes of people. The object of these Defence Loans is to raisei money to expand and equip our army, navy and air force for the defence of our country. By subscribing to these loans you will be paying the best insurance for your freedom and happiness.

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