

# ReadMe

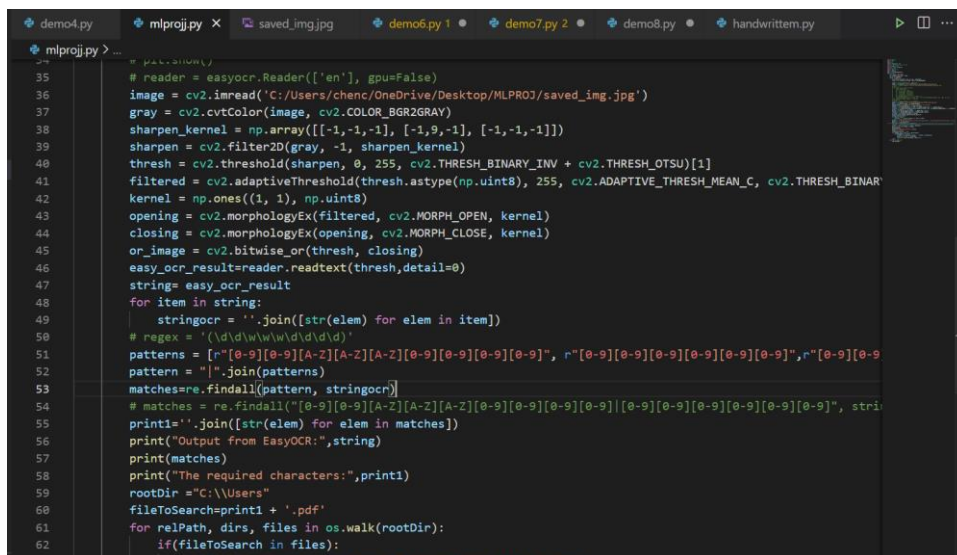
Name:

File opener using Character recognition

Description:

Optical character recognition (OCR) is the process of modifying or converting any type of text or text-containing document, including handwritten, printed, or scanned text images, into an editable digital format for additional and more thorough processing. Text in these papers can be automatically recognised by a machine thanks to optical character recognition technology. When the Image is provided to the EasyOCR model by capturing using system webcam. The characters are recognized based on few qualities namely brightness, angle, etc. Result is successfully passed to the subprocess to search for the file named exactly as the text needed to be recognized and the file is opened in any of the pdf readers, in this project the file is opened in Acrobat Reader.

Visuals:

A screenshot of a code editor with a dark theme. The editor shows a Python script named 'mlproj.py'. The script imports 'easyocr' and 'cv2'. It reads an image from 'C:/Users/chenc/OneDrive/Desktop/MLPROJ/saved\_img.jpg', converts it to grayscale, and applies a sharpening kernel. Then, it uses 'cv2.threshold' and 'cv2.adaptiveThreshold' to process the image. The 'easyocr' library is used to read text from the image. The resulting text is stored in 'stringocr'. A regex pattern is defined to match file names. The script then uses 're.findall' to find matches between the OCR result and the file names. Finally, it prints the matches and searches for a PDF file in the current directory using 'os.walk'.

Installation:

This project can be opened and used on any system preferably windows because the Os has some issues with using the tesseract. The file can be opened in IDE and can be compiled. The user has to make sure the following packages are installed.

1. EasyOCR
2. Subprocess
3. Open-cv
4. Tesseract (optional)

Usage:

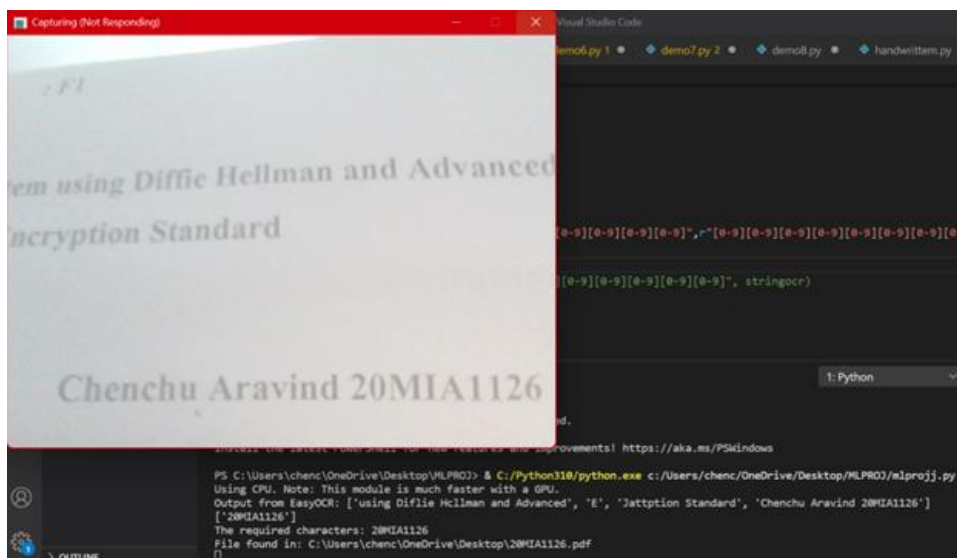
1. When the application is compiled, it takes some time to open the webcam.

2. After the webcam is opened, the user can show the text and press s to click the image, the image should be without any smudges to the text and the area should be well lit in order to get the expected result.
3. If the system has GPU, EasyOCR output will available within a fraction of a second, if not it takes some me, a maximum 1 minute.
4. After the text is recognized, application retrives only the necessary text from the ouptut and pass it to the subprocess to open the file associated with that name.
5. Below are the sample outputs.

### Result-1(When the character 1 is differently printed)



### Result-2( When Image with Multiple words)



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