

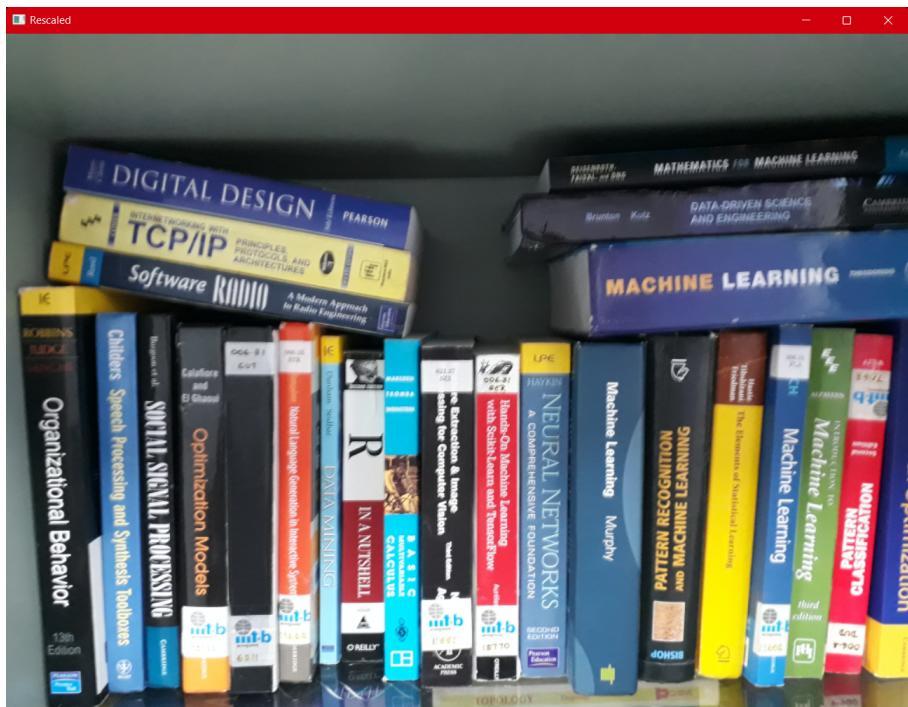
Ungraded Assignment 1

Instructor: Prof. Dinesh Babu

Shaikh Fahed IMT2019079

1 Report on code for CountBooks

- We first rescale our image to an appropriate scale so that it would be easier to read it. I have rescaled the image to 0.25 using a *Rescale(frame, scale = 0.25)* function I created.



- We need to focus on the stack of books present in the image, and therefore, we crop it to the required portion, where only horizontal stack of books is visible.



- We then need to convert our RGB image to grayscale, using the `cv.cvtColor(img, cv.COLOR_BGR2GRAY)` function.



- Now we use the `cv.GaussianBlur(img, (7,7), 0)` function to blur the text. We've used a parameter of kSize (7,7).



- Later on, for Edge Cascading, we can use the `cv.Canny(img, 50, 150, apertureSize=3)` function and Eroding can be done using the `cv.erode(img, (5,5), iterations=3)` function.



- The final step is to draw proper lines at all the potential edges recognizable. This task can be accomplished using the help of ***HoughLinesP*** function. It draws lines at all the potential edges and if we count the lines using ***print(len(lines))***, we get our number of books in the given image.



- The output for the code I wrote was 16, which almost matches with the number of books in the image.

