Department of Electrical Engineering and Computer Science

CIS 465 Multimedia
Fall 2021

Assignment 3
(Due date: 10/22/21)

1. Create a function to convert the RGB image to a grayscale image using the average method. Display the output image along with the respective input image.

2. Create a function to compute the intensity histograms of all the images in part 1 (RGB and grayscale). Plot the histograms of the RGB and grayscale images.

3. Write a program that calls the functions above and performs the histogram equalization on the enclosed image (Image-1). Display the original and histogram-equalized images. Repeat the experiment for different types of input images (*extreme dark and extreme light*).

What to turn in:

Submit your work through **Blackboard** as **one single** folder including:

- An `HTML` file called `index.html` that links to the overall summary of your answers (screenshot of part 1 output).
- A folder called `CIS_465` that includes all files, program codes along with the supported files, dataset needed to reproduce your code (if any), etc.

Notes:

- Please make sure that your program runs successfully at other machines!
- Late submissions will receive a penalty of 10% per day up to two days.
- No material will be accepted after two days past the deadline.
- Email submissions will not be accepted.