

## Medical Imaging Processing (BEI605)

### Homework 2

1. Obtain the images “einstein.tif”. This is a  $490 \times 600$  Gray scale image with 8-bit pixels. Then use MATLAB to:
  - (a) Plot a histogram for the image.
  - (b) Performing Histogram Equalization to the image.
  - (c) Plot a histogram for the output image.
  - (d) Display both the original image and the image after applying histogram equalization.
  - (e) (**Hint**) Although MATLAB has a histogram functions, write your own code to calculate the histogram and histogram equalization.
  
2. Obtain the images “washed\_out\_aerial.tif”. This is a  $765 \times 769$  Gray scale image with 8-bit pixels. Then use MATLAB to perform Image Power-Low Transformation on the image.

$$S = Cr^\gamma$$

Where  $[c = 1, \text{gamma} = 0.4, 3.0, 4.0 \text{ and } 5.0]$

Display the original image and the images after applying the power-low transformation.

**DUE: 08/06/2024**