

Biomedical Image Investigation: Fall 2024

Homework 2

Due: 9/30 PM 2:10

Using the brain image HW2_brain.mat, which is in format of *uint8*, please obtain

(a) its histogram

(b) the result of histogram equalization, including the new image, intensity transformation function, and the corresponding histogram. Write your own script to perform equalization and compare your results with those obtained by MATLAB function script “*histeq*”.

(BONUS: Theoretically there should be no visual difference between your result and that obtained by using “*histeq*”. However, your result might look a little bit brighter if a fixed display window is applied. Can you explain why? You may enter “open histeq” (or “edit histeq”) in the command window to open histeq.m and look into how it works.)

(Hint: The MATLAB codes you might use include: *hist*, *histeq*, *conv2*, *filter2* ...)