Assignment 3

Due by October 24, 2019

This project is to investigate a variety of methods for image enhancement and filtering by *histogram equalization, piecewise linear contrast stretching, median filtering and smooth filtering* as introduced in the class. You are asked to report the following experimental results on the following three images stored in the "unsigned char" Raw image format with the raster-scanned order.

(a) 480×480 arrayR.raw (a microarray image)

(b) 512×512 Whorl.raw (a fingerprint image)

(c) 480×640 gelm1.raw (an electrophoresis gel image)

(1) Do histogram equalization with 8 and 16 gray levels, respectively.

(2) Do contrast stretching with no more than 3 line segments.

(3) Do 5×5 median filtering.

(4) Do 5×5 smooth filtering.

(5*) Other strategies for image enhancement.

(6*) Repeat steps (**1**∼**5**) for images arrayG.raw, geltest.raw, Rloop.raw

You have to turn in image displays together with the source codes, for example, C/C++, Fortran, Pascal, Matlab, and Mathematica codes.