Mid Term-Project
Digital Image Processing
Due-Oct-22

Create a GUI that do the following:
a. Is capable of loading any type of image and convert the image to intensity grayscale image.
b. Be able to find the histogram of the image.
c. BE able to interactively crop the image
d. Be able to find profile (use improfile) of a certain section
e. Time domain analysis Point Processing

- Find image negative
- Log transform
- Gamma correction
- Linear contrast tretching
- Histogram Equalization (adaptive and non-adaptive)

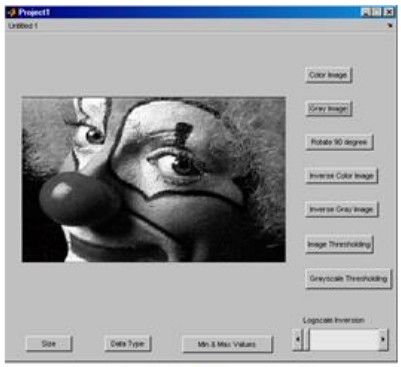
f. Time domain analysis neighborhood Processing

- Low pass
- High pass (Laplacian)
- Gradient (pick from different types)
- High boost
- Local contrast enhancement

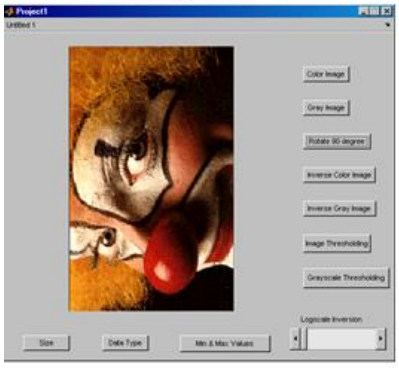
Example:

GUI shown below. Code also is on blackboard.
a. Load "clown.mat" image into Matlab, plot image as both gray scale and color using imshow and image.
b. Determine parameters of image: size, data type, min, max of pixel value.
c. Take inverse of image and plot.
d. Rotate original inage by 90 degrees and plot.
e. Threshold original image. If I(x,y)>50 set pixel 1, otherwise 0 and plot result.
…..

Color Image



Gray Image



90 Degree Rotation

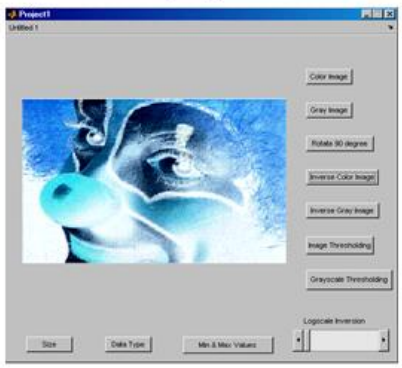


Image Inversion(original Image)

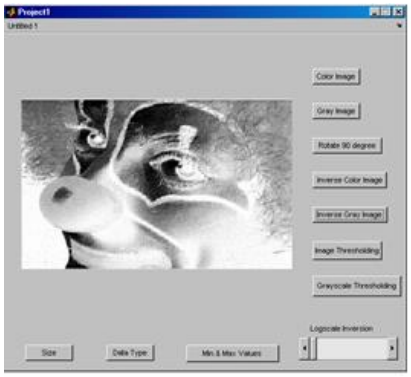


Image Inversion(Gray Image)

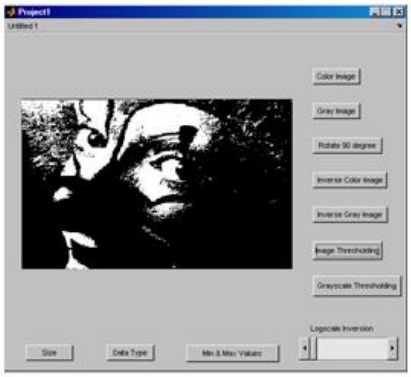


Image Thresholding

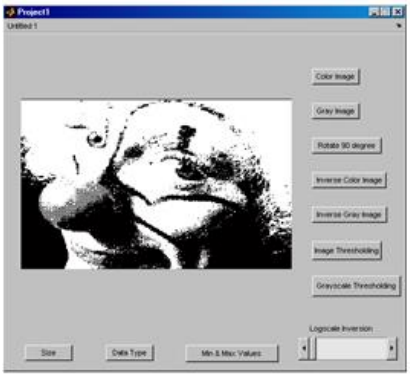


Image Thresholding(Gray Image)

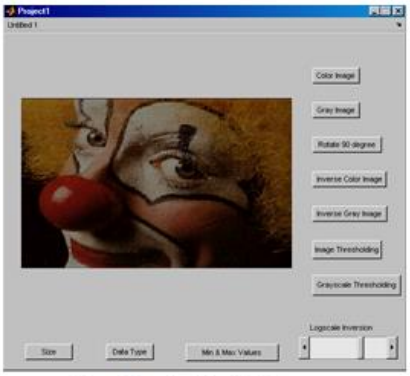


Image Inversion(Log Scale)