# **Assignment 3**

Write GUI based code to perform the following:

1. Write a function to perform spatial quantization. Allow the user to specify the method: decimation, median, and averaging. Incorporate an anti-aliasing filter option for the decimation method.
2. Write a function to implement the labeling algorithm described in the class.
3. Write a Matlab function to find the area; coordinates of center of area and horizontal & vertical Projection of a binary image. Assume the image only contains two objects. Remember that the value that represents “1” for the binary images are actually 255, and “0” is 0.
4. Implement a method for automatic image thresholding (OTSU), where it finds the “best” threshold value.
5. Write a function to implement the canny edge detection algorithm.

Best of Luck.