EC7212 – Computer Vision and Image Processing

Take Home Assignment 2

Write Python programs to perform the following image processing operations.

1. Consider an image with 2 objects and a total of 3-pixel values (1 for each object and one for the background). Add Gaussian noise to the image. Implement and test Otsu's algorithm with this image.

2. Implement a region-growing technique for image segmentation. The basic idea is to start from a set of points inside the object of interest (foreground), denoted as seeds, and recursively add neighboring pixels as long as they are in a pre-defined range of the pixel values of the seeds.

Submission: A pdf with code and the results, along with a GitHub link.