



Benha University

Class: 4th Year Students

Subject: Computer Vision



Faculty of Computers & Informatics

Date: 21/3/2012

Task 4 (Individual):

I. Due

March 28, 2012, at the beginning of class.

II. Objectives

1. Thresholding
2. How to use Morphological operation (erode, dilate, open, close) in Noise Reduction

III. References

1. Slides and handouts posted on the course Web site.
2. Lab handouts.
3. google

IV. Software Required

1. Matlab
2. Microsoft Word

V. Assignment

- a) Read "A.png" image
- b) Convert "A.png" to grayscale
- c) Thresholding
 1. Generate the histogram from the grayscale image
 2. Make threshold at value=.1.
 3. Make threshold using Otsu's method (search on google or matlab help)
 4. Why Otsu's method is better than default threshold?

d) Noise Reduction

1. Make structure element as [1 1 1;1 0 1;1 1 1]
2. Make Morphological process
 - a. Erode
 - b. Dilate
 - c. Open
 - d. Close
 - e. Close-Open
 - f. Open-Close
3. How morphological operation reduce noise?

e) Fig.1 is the output

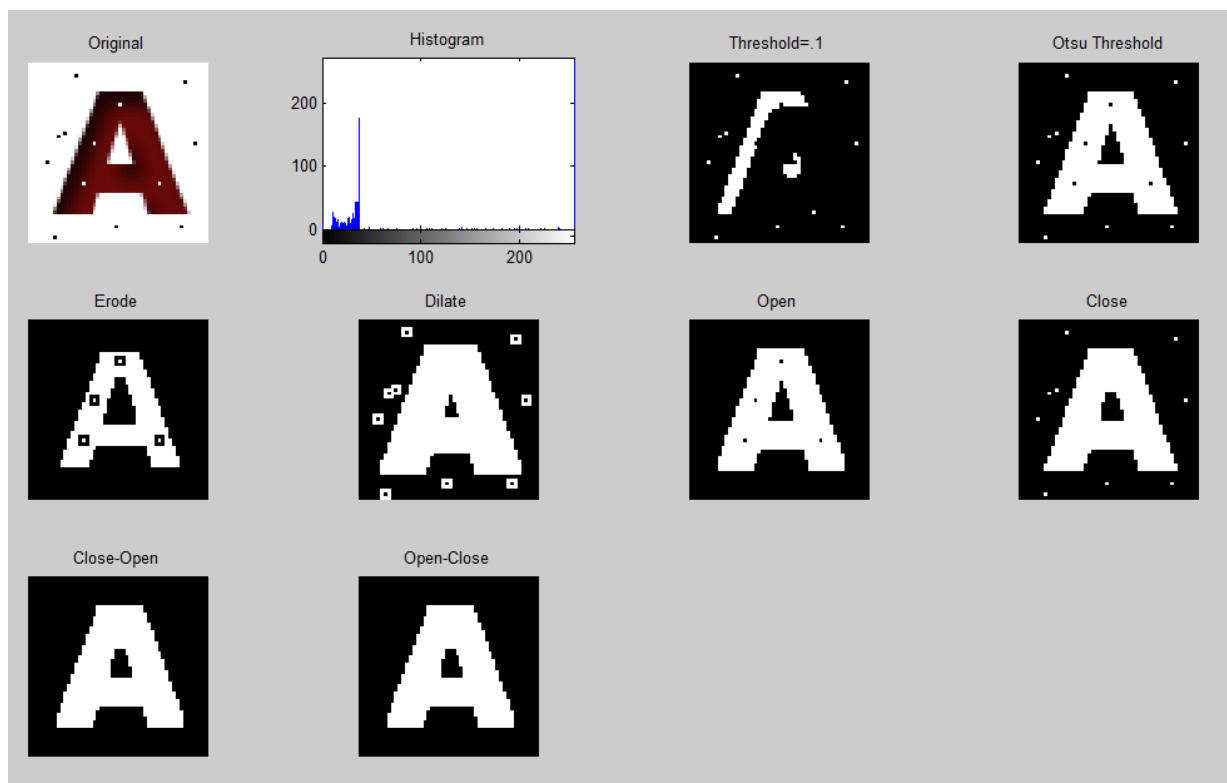


Fig.1