EE420 – Digital Image Processing – Finals

Otsu's thresholding algorithm

1. The MATLAB code is attached to this PDF in a '/code' folder.

2. The mean gray level in the original image is 87.251125 (calculated using mean(I) function).

3. The gray value associated with the Otsu threshold is 96. Comparing to the mean value of the image it's a little larger, but because the measure is from 0 to 255, it is only ~3% difference.

4. My Otsu threshold implementation results are pretty close to the to the MATLAB's implementation of Otsu thresholding using the `graythresh` function – threshold of 97 (in my implementation) and 96 in the MATLAB implementation. We can see that the two results are almost similar.

5. Screenshots of the original image, its histogram and the binarized image obtained using your Otsu thresholding:

   The original image:

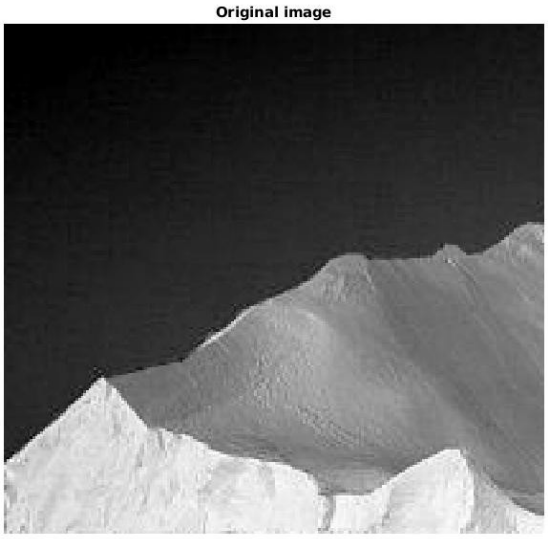
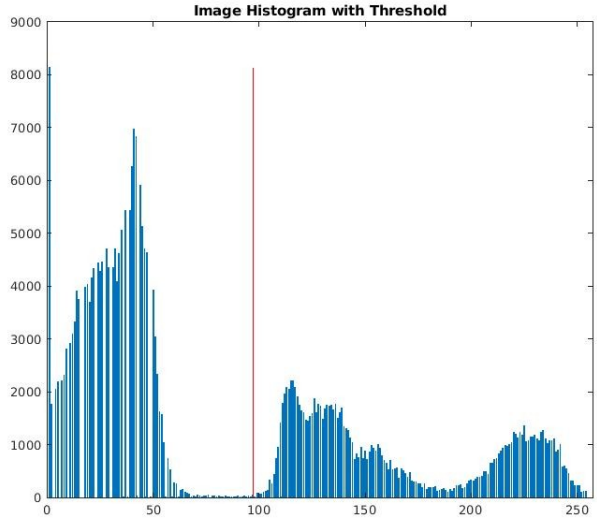
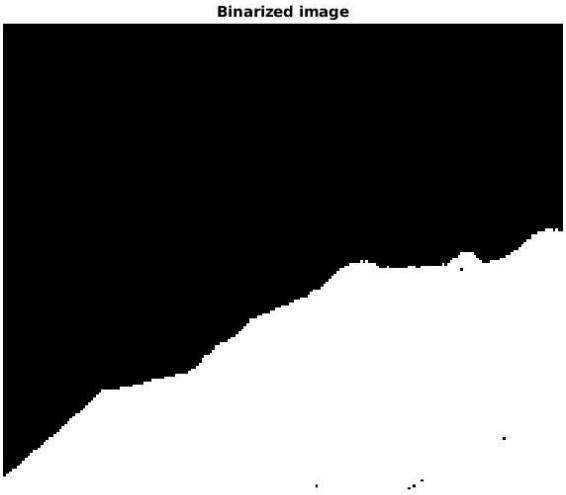


Image histogram & threshold:



The binarized image obtained using my Otsu thresholding:



License plate recognition

1. The MATLAB code is attached to this PDF in a '/code' folder.

2. Screenshots of the binarized license plate and the 7 detected characters:
   The original image:

   The binarized license plate:

   The 7 detected characters: