

Lecture No:6 Image Histogram

Image Histogram

The histogram of an image is a plot of the gray _levels values versus the number of pixels at that value. Given a digital image with gray levels from zero to L , the histogram of the image is a representation of the frequency of occurrence of each gray level in the image.

Generating an image histogram

The histogram generation process is a systematic counting of the number of pixels of every gray level

The process is implemented by:

Iterating through all possible gray

For each gray level value ,
number of pixels in the image
value.

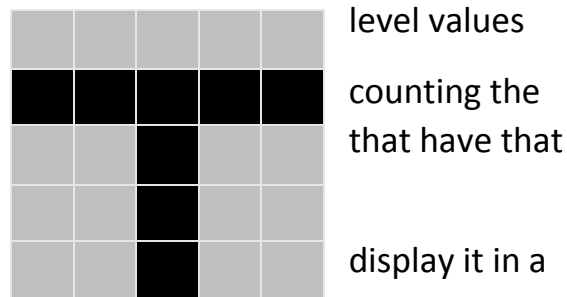
Storing the result in a table or
chart.

For Example:

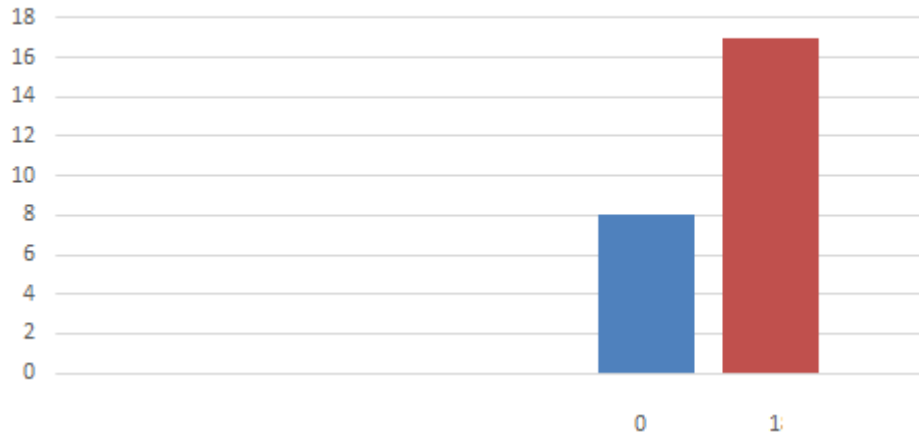
Consider we have this image

And have only two gray levels

0 and 1



Gray level	Frequency
0	8
1	17



Histogram of image

Why the image histogram is important??

The Shape of the histogram provides key information on

The overall quality of the image

The possibility of enhancement

Visual inspection of the histogram is a fast way to analyze the overall image quality

By processing the histogram an image can be quickly and automatically improved.