

Smoothing the Horizontal Histogram by applying Low Pass Filter

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3:55 PM

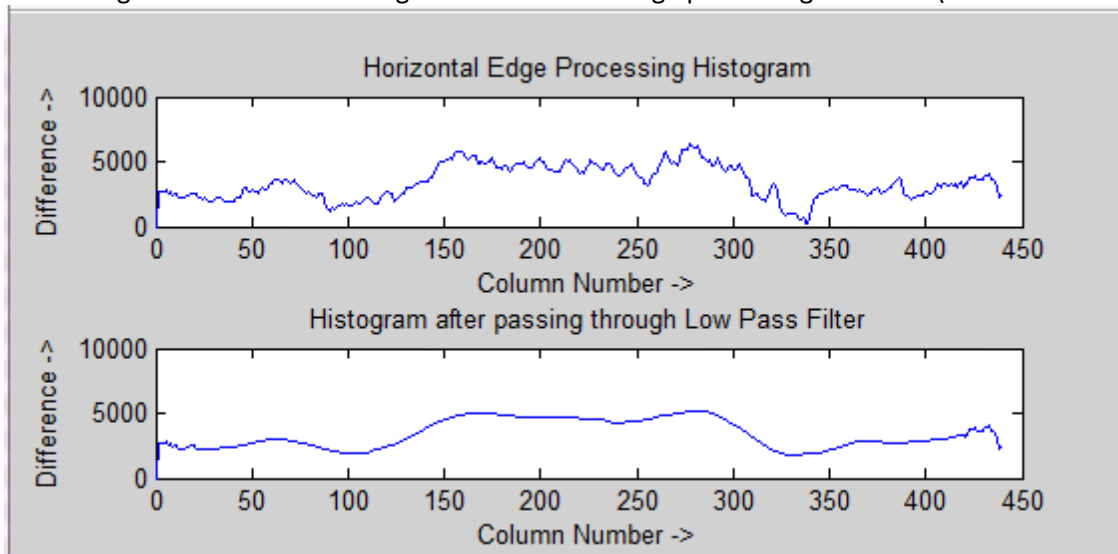
Process:

The histogram generated after Edge Processing in the Horizontal Direction, will have some very drastic changes due to presence of noise and disturbance in an image. To remove such unnecessary disturbance, the histogram is passed through a low-pass filter to smoothen out the changes in histogram values. To implement this step, each histogram value is set to a value equal to the average of previous fifteen histogram values and next fifteen histogram values.

Consider the Image Below :



The Histogram for the above image after horizontal edge processing would be (the above Histogram):



Histogram after smoothening would be like the below one

Algorithm:

<pre>sum = 0; horz = horz1;</pre>	<pre>//initialize sum to 0 and Horz to horz1</pre>
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<pre>for i = 21:(cols-21) sum = 0; for j = (i-20):(i+20) sum = sum + horz1(j); end horz(i) = sum / 41; end</pre>	<pre>//This Process starts from the column no 21st to 21st Last Column //So the 20 column values before and the after the current column are summed //These summed value is divided by 41 to find average value</pre>
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