Computer Vision

Project -1

Submitted by

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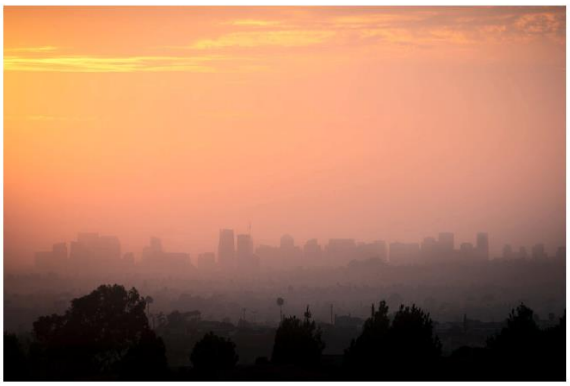
First program: linear stretching

The below image works for linear stretching which expands the original input values of the image, the total range of sensitivity of the display device can be utilized. The Hazy or fog images works well for linear stretching.



However, for the bright images(as you see one below), it does not show any better results as compared to above.

Second program: histogram equalization

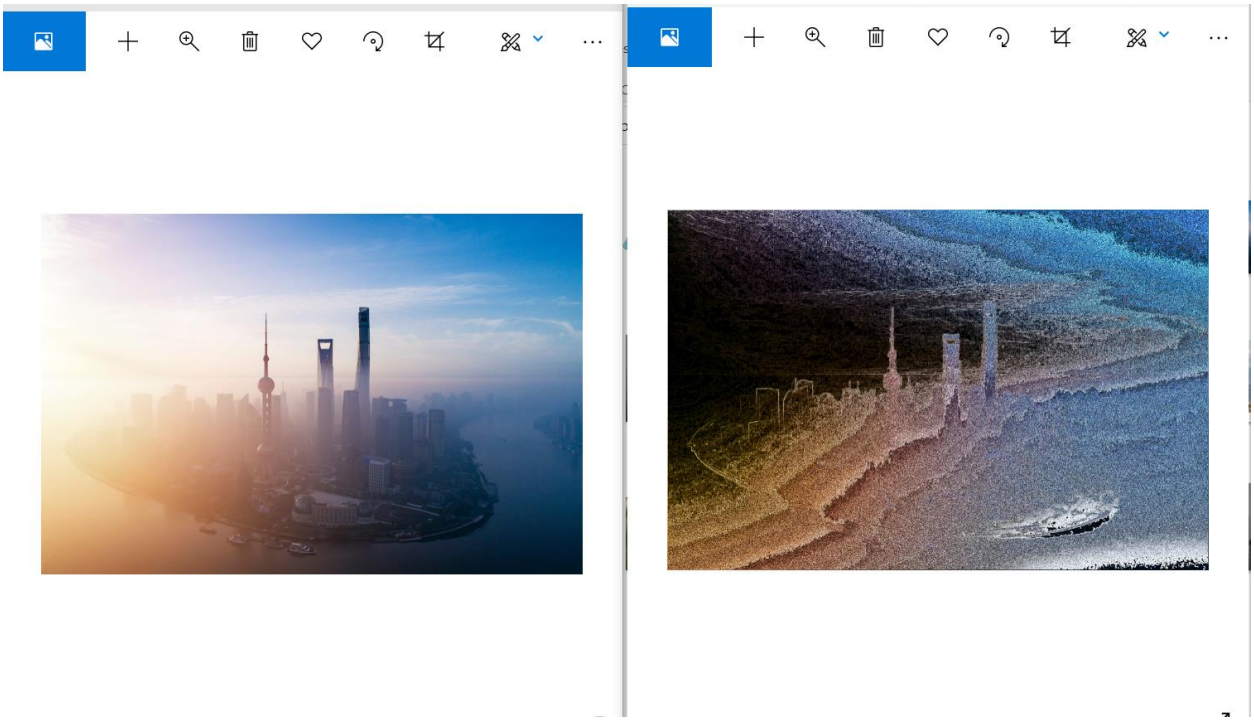
Histogram equalization is a method in image processing of contrast adjustment using the image's histogram. So, for histogram equivalization we have to choose high contrast level images to see the equalization of color intensity among the image.

But for lighter/dull images the histogram equivalent doesn't have much effect

Third program: adaptive linear stretching

The linear stretching gives better illumination to the less contrast (Hazy images).

W = 2



Linear stretching on high contrast images with bright color will not show much effect.

W = 12

Fourth program: adaptive histogram equalization

The output L(i; j) is computed by applying histogram equalization to the window of size (2w+1_2w+1) centered at i; j. The L value at the center of the window is the output value L(i; j).
So, we apply the histogram equalization to the given window.

W = 50

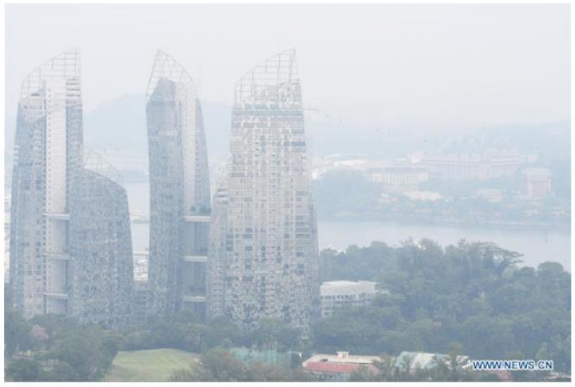
Having w = 50, shows the better image contrast with the window

W = 2

With this window, the whole image gets blurred.

With less contrast pictures, the histogram equivalization doesn't give much effect.

W = 10



With more window size, the image gets distorted.

W = 50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