Subject: Re: HIST\_EQUAL

Posted by davidf on Fri, 15 Dec 2000 20:15:57 GMT

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"Sergio Ahumada N." ("Sergio Ahumada N." <san[@]inf.utfsm.cl>) writes:

- > I need to know what's the difference between HISTOGRAM and
- > HIST\_EQUAL functions, I don't find so much info about this.

>

> Is HIST\_EQUAL a graphics of density distribution?

HIST\_EQUAL is a histogram equalization method, whereby the pixel values in an image are changed and re-distributed in such as way that if you took a histogram of a histogramequalized image, there would be approximately the same number of pixels in each histogram bin.

HISTOGRAM is a function for performing black magic on IDL arrays. (I would strongly advise you against reading any article that has "histogram" in the Subject field. Along that path lies destruction.)

In every day use, however, the HISTOGRAM function can tell you how many pixels in an image have the same value. In other words, the histogram gives you a sense of how the pixel values are distributed in an image.

For example, try this:

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

filename = Filepath('ctscan.dat', Subdir=['examples','data'])
OpenR, lun, filename, /Get\_Lun
image = BytArr(256, 256)
ReadU, lun, image
Free\_Lun, lun

Window, 0, XSize=600, YSize=350
!P.Multi = [0, 2, 1]
TVImage, image
Plot, Histogram(image), XTitle='Pixel Value', XStyle=1, \$
YTitle='Number of Pixels', Title='Normal Image'

Window, 1, XSize=600, YSize=350
histoimage = Hist\_Equal(image)
TVImage, histoimage
Plot, Histogram(histoimage), XTitle='Pixel Value', XStyle=1, \$
YTitle='Number of Pixels', Title='Histogram Equalized Image'

!P.Multi=0
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You can find the TVImage program on my web page:

http://www.dfanning.com/programs/tvimage.pro

Cheers,

David

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Coyote's Guide to IDL Programming: http://www.dfanning.com/

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