Subject: Re: Does IDL has histogram matching function?
Posted by David Fanning on Mon, 18 Nov 2002 23:49:41 GMT
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Paul Sorenson (aardvark62@msn.com) writes:

> There is an undocumented keyword to HIST_EQUAL that looks like it
> might do the same thing as Davids HistoMatch. Here is an example:
>
> filename = filepath('ctscan.dat', subdir=['examples', 'data'])
> image = read_binary(filename, data_dims=[256, 256])
>
> desired_hist = histogram(hist_equal(image), min=0, max=255)
>
> window, xsize=3*256, ysize=256
> tv, image, 0
> tv, hist_equal(image), 1
> tv, hist_equal(image, fcn=total(desired_hist, /cumulative)), 2
> end

I think this is probably right, but I think
both this function and the code that I threw off
in a couple of minutes earlier in the week suffers
from a deficiency.

As it happens, I need a histogram-match-by-region
capability. In other words, the user wants to select
a region in an image, and use the histogram of that
region to adjust the histogram of the entire image.

This example and my previous code work if the histograms
are taken from images of the same size. They do not work
correctly (I think) if the histograms use images of different
sizes. In that case, you must normalize the histograms to the
same "total number" of pixels. I'll probably have this on
my web page soon, with the corrections in it. I just didn't
want anyone getting too far down the wrong road here. :-)

Cheers,

David

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