Subject: Re: hist_2d question
Posted by Jeremy Bailin on Wed, 17 Dec 2008 00:20:59 GMT
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On Dec 16, 2:19 pm, "Jeff N." <jeffnettles4...@gmail.com> wrote:
> On Dec 16, 12:49 pm, Chris <beaum...@ifa.hawaii.edu> wrote:
>
>
>
>> On Dec 16, 3:45 am, "Jeff N." <jeffnettles4...@gmail.com> wrote:
>
>>> Hi folks,
>
>>> I'm working with 2d histograms for the first time, and have a question
>>> the documentation doesn't seem to answer (or i missed it).
>
>>> Is there a way to construct your bins such that you'll know how many
>>> output DN your image has? I want to put a color table on my image,
>>> and have been constructing color tables to match the number of output
>>> DN, which is fine but i'm wondering if there's a way to ensure 256 DN
>>> in the output. I'm sure the answer to this question is "make your
>>> bins right", but i'm wondering if there's a straightforward way to
>>> calculate how to do that.
>
>>> Thanks for any help,
>>> Jeff
>
>> I don't know of any easy way to do this, but I assume you want the
>> __peak__ number of counts in a bin to be 256 (the total number is just
>> the number of datapoints you feed into the histogram call, unless you
>> clip out the edges). Why not just use bytscl() to scale the result
>> afterwards?
>
> Hi Chris,
>
> Thanks for getting back to me...one of my little issues was that i was
> using some code sent to me by someone else. I finally looked at their
> code and realized what i should've known from the start: they were
> applying a color table using a (1d) histogram of the 2d histogram, so
> all i need to do is make that histogram give me 256 bins, make a color
> table with a color for each bin in the histogram, and i should be all
> set (in theory of course!).
>
> Thanks,
> Jeff

On a marginally related note, I recently wrote code for doing
histogram equalization of images made from 2d histograms (ie. hist_2d

or hist_nd... in fact, the code should work for multi-dimensional histograms made with hist_nd, but I've never tested it), in case anyone would find it useful:

http://web.astroconst.org/jbiu/jbiu-doc/plot/histeq.html

The result should have approximately equal numbers of pixels in each intervals of value.

(not yet in an official JBIU release, but you can grab the code from the Source link)

-Jeremy.
