Subject: distribution of colors for an image
Posted by R.Bauer on Tue, 26 Oct 2004 17:05:43 GMT
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Dear all,

Did someone know a routine to show in a simple XY Plot the distribution
of colors for an image?

cheers

Reimar

Subject: Re: distribution of colors for an image
Posted by R.Bauer on Wed, 27 Oct 2004 13:37:16 GMT
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Karsten Rodenacker wrote:
> Perhaps
> u=uniq(long(a),sort(long(a)))
> help,u,h
> U LONG = Array[15]
> H LONG = Array[15]
> tends in the direction of understanding?

Oh I see the dist function was a bad example to use
Thanks for this hint.

:-)

Reimar

>
> Regards
> Karsten
>
> On Wed, 27 Oct 2004 13:32:13 +0200, Reimar Bauer
> <R.Bauer@fz-juelich.de> wrote:
>
>> David Fanning wrote:

>>
>>> Reimar Bauer writes:
>>>
>>>> Did someone know a routine to show in a simple XY Plot the
>>>> distribution of colors for an image?
>>>
>>> I think that is called a histogram, Reimar. :-)
>>> Cheers,
>>> David
>>>
>>
>>
>> fine, I have seen a lot of instruction on your marvellous web page.
>>
>> But I don't understand the result I got. Lets show an example.
>>
>> a=dist(20)
>> h=histogram(a)
>> print,max(a),max(h)
>>   14.1421   56
>>
>>
>> u=uniq(a,sort(a))
>> help,u,h
>> U   LONG   = Array[61]
>> H   LONG   = Array[15]
>>
>> Why could be h higher as a?
>> Why doesn't I got a vector length of 61 as uniq tells?
>>
>>
>> More and more I believe the first question does not describe what I
>> want. .
>>
>>
>> Reimar
>>
>>
>>
>
>
>

--
Reimar Bauer

Institut fuer Stratosphaerische Chemie (ICG-I)

Forschungszentrum Juelich
email: R.Bauer@fz-juelich.de
---------- -------
a IDL library at ForschungsZentrum Juelich
http://www.fz-juelich.de/icg/icg-i/idl_icglib/idl_lib_intro. html
========== =======

Subject: Re: distribution of colors for an image
Posted by R.Bauer on Wed, 27 Oct 2004 13:57:00 GMT
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David Fanning wrote:
> Reimar Bauer writes:
>
>
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>>
>> But I don't understand the result I got. Lets show an example.
>>
>> a=dist(20)
>> h=histogram(a)
>> print,max(a),max(h)
>> 14.1421 56
>>
>>
>> u=uniq(a,sort(a))
>> help,u,h
>> U LONG = Array[61]
>> H LONG = Array[15]
>>
>> Why could be h higher as a?
>> Why doesn't I got a vector length of 61 as uniq tells?
>
>
> You asked about color distribution in an image. A histogram
> will tell you (with a byte scaled image, of course) how many
> pixels in the image have a particular color. It will even
> tell you which pixels those are, but that is another story,
> best explained with JD's Histogram Tutorial.
>
> In your case H is fifteen elements long, because your data
> had values between 0 and 15, and you used a bin size of 1,
> by default. The *numbers* returned from histogram, told you
> the pixel distribution of those 15 "colors". In one bin, for
> example, you had 56 pixels values that fell into that bin.
>
> You had 61 unique numbers in your data, but all 61 of them fell

> into one of the 15 bins you set up.
>
> To see your color distribution, you want to plot the histogram
> of your data:
>
> data = dist(200)
> Plot, Histogram(data), XStyle=1, $
> XTitle='Color Distribution', YTitle='Number of Pixels'
>
> Does that help?
>

Yes, this is very good explained.

Now it is clear and I know why I was so irritated of the result I got.

I have used a circular clipping of an image and have missed that's histogram uses always rectangular input. The background color which clips the data to invisible is count highest. If I don't use max_value I see nothing on the plot.

Thanks for all help

Reimar

> Cheers,
>
> David
>

--
Reimar Bauer

Institut fuer Stratosphaerische Chemie (ICG-I)
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---------- -------
a IDL library at ForschungsZentrum Juelich
http://www.fz-juelich.de/icg/icg-i/idl_icglib/idl_lib_intro. html
========== =======

Subject: Re: distribution of colors for an image
Posted by JD Smith on Wed, 27 Oct 2004 17:27:17 GMT
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On Wed, 27 Oct 2004 15:57:00 +0200, Reimar Bauer wrote:

> David Fanning wrote:
>> Reimar Bauer writes:
>>
>>
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>>>
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>
> I have used a circular clipping of an image and have missed that's
> histogram uses always rectangular input. The background color which
> clips the data to invisible is count highest. If I don't use max_value I
> see nothing on the plot.

Another way to recover all 61 of your input values, illustrating how bin size has everything to do with the number of non-zero histogram elements:

```
IDL> a=dist(20)
IDL> h=histogram(a,BINSIZE=.05)
IDL> wh=where(h gt 0,cnt)
IDL> print,cnt
        61
```

But beware of using HISTOGRAM on floating point data in cases where you care whether a given value falls in one bin or another (see the "razor's edge" article http://www.dfanning.com/math_tips/razoredge.html).

JD