
Subject: Re: distribution of colors for an image
Posted by [David Fanning](#) on Tue, 26 Oct 2004 17:17:53 GMT
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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

--

David W. Fanning, Ph.D.
Fanning Software Consulting, Inc.
Coyote's Guide to IDL Programming: <http://www.dfanning.com/>
Phone: 970-221-0438, IDL Book Orders: 1-888-461-0155

Subject: Re: distribution of colors for an image
Posted by [R.Bauer](#) on Wed, 27 Oct 2004 11:32:13 GMT
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David Fanning wrote:

> Reimar Bauer writes:

>

>

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>> of colors for an image?

>

>

> I think that is called a histogram, Reimar. :-)

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> 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

Subject: Re: distribution of colors for an image
Posted by [Karsten Rodenacker](#) on Wed, 27 Oct 2004 12:06:23 GMT
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```
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?
```

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. :-)
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> 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
>
>
>

--

Karsten Rodenacker

----- :-)
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Subject: Re: distribution of colors for an image
Posted by [David Fanning](#) on Wed, 27 Oct 2004 12:58:52 GMT
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Reimar Bauer writes:

> fine, I have seen a lot of instruction on your marvellous web page.
>
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> h=histogram(a)
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>    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?

Cheers,

David

--

David W. Fanning, Ph.D.

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