
Subject: Re: rebin but ignore zero

Posted by [David Fanning](#) on Fri, 26 Sep 2008 20:15:28 GMT

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David Klassen writes:

- > I have a very sparse array (image) and I want to resize it---shrink
- > it by a factor of 2 in each direction. If I do a rebin, every pixel
- > is
- > replaced by its nearest neighbor average, but many of those
- > neighbors are zeroes---not real zeroes, but zero because there
- > is no data there. This means, the resulting rebin-ed image has
- > values that are smaller than they "should" be.
- >
- > Is there a way to do a rebin that can ignore these "blank" pixels?

In contrast to what the documentation says, REBIN insists on doing bilinear sampling when minifying a dimension. You can overcome this by setting the SAMPLE keyword. Then nearest-neighbor sampling will be enforced, and your data values won't change.

```
IDL> a=fltarr(10,10)
```

```
IDL> a[2,2] =1
```

```
IDL> a[8,8] = 1
```

```
IDL> print, rebin(a, 5, 5)
```

0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.250000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.250000

```
IDL> print, rebin(a, 5, 5, /SAMPLE)
```

0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	1.00000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	0.000000
0.000000	0.000000	0.000000	0.000000	1.00000

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

Subject: Re: rebin but ignore zero

Posted by [David Klassen](#) on Sun, 28 Sep 2008 21:13:26 GMT

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On Sep 26, 4:15 pm, David Fanning <n...@dfanning.com> wrote:

> David Klassen writes:

>

>> Is there a way to do a rebin that can ignore these "blank" pixels?

>

> In contrast to what the documentation says, REBIN insists on doing

> bilinear sampling when minifying a dimension. You can overcome

> this by setting the SAMPLE keyword. Then nearest-neighbor sampling

> will be enforced, and your data values won't change.

Interesting---so I have to do the opposite of the help. :)

OK, that does it for the most part. I guess the array is just too sparse

because it is still zeroing out some points, but at least the values seem

to be OK. Thanks!

Subject: Re: rebin but ignore zero

Posted by [David Fanning](#) on Sun, 28 Sep 2008 21:30:28 GMT

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David Klassen writes:

> Interesting---so I have to do the opposite of the help. :)

My all-time favorite book is Desert Notes/River Notes by Barry Lopez. And my favorite story in that book, which I was just thinking about again today, as a matter of fact, is Directions.

Here he is giving "directions" to the reader:

"There is, I should warn you, doubt too about the directions I will give you here, but they are the very best that can be had. They will not be easy to follow. Where it says left you must go right sometimes. Read south for north sometimes. It depends a little on where you are coming from, but not entirely."

I love that story. And I miss telling it for my IDL programming courses. It forms the underlying theme of my IDL books. Worth reading for any IDL programmer, I should think. :-)

<http://www.librarything.com/work/2496108/details/28551525>

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

Sepore ma de ni thui. ("Perhaps thou speakest truth.")
