
Subject: Re: inverting a binary image(array)?

Posted by [David Fanning](#) on Fri, 04 Nov 2011 23:09:58 GMT

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desertdryad writes:

> I have the need, in an IDL 7.0 / ENVI 4.5 script, to take a rather
> large raster (Landsat tile sized) of 1's and 0's, and invert it, in
> preferably an efficient manner. What's the most streamlined way to do
> this?

What does "invert" mean in this context?

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

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

Subject: Re: inverting a binary image(array)?

Posted by [Jeremy Bailin](#) on Sun, 06 Nov 2011 04:29:58 GMT

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On 11/4/11 6:54 PM, desertdryad wrote:

> Hi folks -

>

> I have the need, in an IDL 7.0 / ENVI 4.5 script, to take a rather
> large raster (Landsat tile sized) of 1's and 0's, and invert it, in
> preferably an efficient manner. What's the most streamlined way to do
> this?

>

> thanks,

> Cyndy

>

If by "invert" you mean turn the 1s to 0s and the 0s to 1s, I would hazard a guess that you're not going to get much more efficient than

`data = 1 - data`

-Jeremy.

Subject: Re: inverting a binary image(array)?
Posted by [Jim Pendleton](#) on Sun, 06 Nov 2011 15:24:35 GMT
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On Nov 4, 3:54 pm, desertdryad <dry...@gmail.com> wrote:
> What's the most streamlined way to do this?

In the ENVI environment, you might consider writing a simple band math user function.

Look for the "Band and Spectral" math section of the ENVI Programmer's Guide in the online help.

You'll then have a function you can reuse in other contexts within ENVI.

ENVI will tile the data as necessary so if the image is very large you won't exhaust memory.

For extra points, use the TEMPORARY function and use the same data type as the input band to prevent upcasting and unnecessary data copying, (e.g., for byte data: RETURN, 1B - TEMPORARY(b1), for unsigned short data: RETURN, 1US - TEMPORARY(b1)).

Social media alert: I work for Exelis VIS, but any implied or expressed opinions are my own.

Subject: Re: inverting a binary image(array)?
Posted by [M. Katz](#) on Mon, 07 Nov 2011 08:00:55 GMT
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In my quick tests,
a = ~temporary(a)
seems to have the same speed as
a = 1b - temporary(a)

Subject: Re: inverting a binary image(array)?
Posted by [desertdryad](#) on Mon, 07 Nov 2011 19:58:21 GMT
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David - 'invert' as in, 0's become 1's, and vice-versa.

On Nov 7, 1:00 am, "M. Katz" <MKatz...@yahoo.com> wrote:
> In my quick tests,
> a = ~temporary(a)

Say, thanks! I tried this, and it works right quick.
