Subject: Re: newbie question on array manipulation
Posted by ben.bighair on Tue, 05 May 2009 11:53:16 GMT
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On May 5, 7:40 am, jpardila <blu...@gmail.com> wrote:
> What is the best way to manipulate one array and remap its values
> according to conditions?
> Let's say I have a 2-d array, for all the elements equal to 5 I want
> to change their values to 0. For values equal to 10 I want to convert
> to 1 and so on. I am really confused and don't know if to use IF,
> where, for or while. Thanks for answering this basic one.
> JP

Hi,

The simplest is to use where - don't forget to use the output COUNT
argument shown here as "na".

a = WHERE(array EQ 10, na)
if (na GT 0) then array[a] = 1

If you are doing a multiple replacements (of different values) in a
single array then you'll want to strap your sneakers on and use
HISTOGRAM with it's REVERSE_INDICES output keyword. See
http://dfanning.com/tips/histogram_tutorial.html for more on that - it
is the swiss knife of IDL.

CHeers,
Ben

Subject: Re: newbie question on array manipulation
Posted by Jean H. on Tue, 05 May 2009 13:06:59 GMT
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ben.bighair wrote:
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>
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Also, if you have several values to changes, you can create a new array.
For example, if you want to change 5 -> 0 and 0 -> 10, but you don't
want to change the old 5 to 10!

copy = array ;copy the array
a = WHERE(array EQ 10, na)
if (na GT 0) then copy[a] = 1

Jean

Subject: Re: newbie question on array manipulation
Posted by ben.bighair on Tue, 05 May 2009 13:24:49 GMT
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On May 5, 7:53 am, "ben.bighair" <ben.bigh...@gmail.com> wrote:
> On May 5, 7:40 am, jpardila <blu...@gmail.com> wrote:
>
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>

Hi again,

Another thought after a cup of coffee... if your application uses floating point values instead of integers then you should search this news group for info on how to test for equality with floats (single or double precision).

Cheers (again),
Ben

Subject: Re: newbie question on array manipulation
Posted by jpardila on Wed, 06 May 2009 06:54:46 GMT
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Thank you so much for your help Jean and Ben. The link on histogram is very good. I follow the tutorial and yes it can be quite handy. For now I just used the where statement as I only have to change a few values. I am happy to finally find out this here as I always used so far the Raster Calculator in ArcGis when doing raster operations. Now to completely close the gap I wonder if those operations can also be done effectively to model relationships between different layers which are georreferenced and overlap each other (they come from ENVI) but might cover different extents. Something like if in arrayA[a] = 5 then arrayB= 100. This is based purely on the geographic location of pixels (x,y coordinates). I hope it is clear what I mean.
Next cup of coffee is on me!! Cheers,
JP
