Subject: Array into binary array
Posted by Oliver Angelil on Mon, 18 Nov 2013 07:51:09 GMT
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I have an array:

A =MAKE_ARRAY(4000, 120, 60, 3, /FLOAT, VALUE =!VALUES.F_NaN)

It consists of numbers between 0 and 1 as well as NaN values. I want to make a binary array from this, such that when an element is NaN, it'll be 0 in the binary array, and when it is a number between 0 and 1, it'll be 1 in the binary array.

Perhaps there is a quick solution which I have not found yet?

Thanks in advance,

Oliver

Subject: Re: Array into binary array
Posted by Helder Marchetto on Mon, 18 Nov 2013 08:18:19 GMT
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On Monday, November 18, 2013 8:51:09 AM UTC+1, Oliver Angelil wrote:
> I have an array:
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> Thanks in advance,
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>
>
> Oliver

Hi Oliver,
how about using the FINITE() function (http://www.exelisvis.com/docs/FINITE.html).

```
IDL> PRINT, FINITE(ALOG(FINDGEN(10)-5.0))
  0   0   0   0   0   0   1   1   1   1
IDL> help, FINITE(ALOG(FINDGEN(10)-5.0))
<Expression>    BYTE      = Array[10]
IDL> PRINT, ALOG(FINDGEN(10)-5.0)
       -NaN       -NaN       -NaN       -NaN       -NaN       -Inf     0.000000     0.693147
1.09861      1.38629
```

You might then use WHERE to locate the NaN or finite value accordingly.

So, in your case I would use something like this (free to modify):

```
B = BYTARR(4000, 120, 60, 3)
FiniteVals = WHERE(FINITE(A), Count)
IF Count GT 0 THEN B[FiniteVals] = 1B
```

Finite will find both NaNs and Inf. Use the appropriate keywords of Finite if you wish to select only one of the two.

Hope it helps.

Regards,
Helder

Subject: Re: Array into binary array
Posted by lecacheux.alain on Mon, 18 Nov 2013 08:57:53 GMT
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Le lundi 18 novembre 2013 08:51:09 UTC+1, Oliver Angelil a écrit :
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> Oliver

This is the purpose of the FINITE function. From IDL documentation:

"Returns 1 (True) if its argument is finite. If the argument is infinite or not a defined number (NaN), the FINITE function returns 0 (False). The result is a byte expression of the same structure as the argument X."

Then, you can simply write:
IDL> A =MAKE_ARRAY(4000, 120, 60, 3, /FLOAT, VALUE =!VALUES.F_NaN)
... populate A ...
IDL> B = Finite(A)
use B ...

alx.

Subject: Re: Array into binary array
Posted by Oliver Angelil on Mon, 18 Nov 2013 09:08:52 GMT
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B = Finite(A)

is what I wanted. Wow, that was extremely easy. Thanks a lot you two!

Oliver

On Monday, 18 November 2013 09:57:53 UTC+1, alx wrote:
> Le lundi 18 novembre 2013 08:51:09 UTC+1, Oliver Angelil a écrit :
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