Subject: Re: Manipulation using where
Posted by Vince Hradil on Wed, 21 Mar 2007 14:16:04 GMT
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On Mar 21, 8:25 am, "Vidhya" <vidh...@gmail.com> wrote:
> Hi all,
>
> I have an image, SUBIMAGE LONG = Array[372, 374, 62] and I
> would like to find all the values equal to zero (basically missing
> lines/rows). Right, done using
>
> z = where(subimage(*,*,*) EQ 0, count)
>
> The result is one-dimensional array: LONG = Array[15457]
>
> now I would like perform an operation trying to find which row there
> are in, and find the averages of the rows above and below and
> replacing them for those found zero values.
>
> How do I go about this?
>
> I tried using array_indices, but its bit confusing.
> Your help is appreciated.
>
> Thanks,
> Vidhya

z_x = z mod 372
z_y = z/372 mod 374
z_z = z/372/374 mod 62

Cheers

Subject: Re: Manipulation using where
Posted by Vidhya on Wed, 21 Mar 2007 14:41:51 GMT
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Hi David,

But the problem, I have the row which have an alternate values of zero
and some integers.

0 25695 0 25966 0
27235 0 37145 0 94282
0..... something like this!

So couldnt find with total of all the column elements.

So I tried to specify as to where there are zero.

Any suggestions?

On 21 Mar, 15:19, David Fanning <n...@dfanning.com> wrote:
> Vidhya writes:
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>> are in, and find the averages of the rows above and below and
>> replacing them for those found zero values.
>
>> How do I go about this?
>
>> I tried using array_indices, but its bit confusing.
>
> I think you are going about this in the wrong way.
> If a row is missing, all the column values in that
> row are zero. Thus, if you totaled your array over
> the column dimension, you would find the locations
> where all the columns values were zero, since these
> would be zero.
>
> Consider a simple example.
>
> a = Indgen(4, 5, 3)
> a[*,2,1] = 0
> Print, a
> 0 1 2 3
> 4 5 6 7
> 8 9 10 11
> 12 13 14 15
> 16 17 18 19
>
> 20 21 22 23
> 24 25 26 27
> 0 0 0 0
> 32 33 34 35
> 36 37 38 39
>
> 40 41 42 43

> 44 45 46 47
> 48 49 50 51
> 52 53 54 55
> 56 57 58 59
>
> t = Total(a, 1) ; Total over columns
> Print, t
> 6.00000 22.0000 38.0000 54.0000 70.0000
> 86.0000 102.000 0.000000 134.000 150.000
> 166.000 182.000 198.000 214.000 230.000
>
> index = Where(t EQ 0)
> rowframe = Array_Indices(Size(t,/Dim), index, /Dim)
> row = rowframe[0] & frame = rowframe[1]
> Print, row, frame
> 2 1
>
> So, you know that all the column values in row 2, frame 1
> are zero. Now you can do whatever you like with that
> information. :-)
>
> 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: Manipulation using where
Posted by David Fanning on Wed, 21 Mar 2007 15:19:07 GMT
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Vidhya writes:

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>
>
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where all the columns values were zero, since these
would be zero.

Consider a simple example.

```
a = Indgen(4, 5, 3)
a[*,2,1] = 0
Print, a
   0      1      2      3
   4      5      6      7
   8      9     10     11
  12     13     14     15
  16     17     18     19

  20     21     22     23
  24     25     26     27
   0      0      0      0
  32     33     34     35
  36     37     38     39

  40     41     42     43
  44     45     46     47
  48     49     50     51
  52     53     54     55
  56     57     58     59

t = Total(a, 1) ; Total over columns
Print, t
  6.00000      22.0000      38.0000      54.0000      70.0000
  86.0000      102.000     0.000000      134.000      150.000
  166.000      182.000      198.000      214.000      230.000

index = Where(t EQ 0)
rowframe = Array_Indices(Size(t,/Dim), index, /Dim)
row = rowframe[0] & frame = rowframe[1]
Print, row, frame
       2           1
```

So, you know that all the column values in row 2, frame 1
are zero. Now you can do whatever you like with that
information. :-)

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: Manipulation using where
Posted by David Fanning on Wed, 21 Mar 2007 15:52:47 GMT
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Vidhya writes:

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> and some integers.
>
> 0 25695 0 25966 0
> 27235 0 37145 0 94282
> 0..... something like this!
>
> So couldnt find with total of all the column elements.
>
> So I tried to specify as to where there are zero.
>
> Any suggestions?

Well, perhaps then it is all the row values in a particular
column that are zero. In that case, you would total
over the second dimension, rather than the first. The
principle is exactly the same.

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: Manipulation using where
Posted by wxf on Thu, 22 Mar 2007 08:26:22 GMT
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Somebody above use "mod-method".That is correct.

I often use "array_indices" function to change the result of "where"
into two dimensional coordinates.It's ok,but I never tried 3-D case.

```
IDL> dat=dist(400,300) ; a data array
IDL> index=where (dat eq 100)
IDL> ind = array_indices(dat,index)
IDL> xarray=ind(0,*) ; get X
IDL> yarray=ind(1,*) ; get Y
IDL> tvscl, dat ; show image
IDL> plots, xarray, yarray, psym=2, color=150,/dev ;over plot the
points
```

If you want to change (x,y) into one dimensional coordinate('where()'-
result),you can use this formula.

```
;your image size-(m,n),any coordinates(x,y)
;position=mL*long(round(y))+long(round(x))
```

You see,it is not difficult.3-D's case and formula can be available
just do the same thing.
Good luck
wxf