Subject: Re: Max value vector
Posted by Amara Graps on Wed, 26 May 1999 07:00:00 GMT
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"Thomas C. Stubbings" wrote:
>
> What I would need is something like the MATLAB command max(i) where i is an
> array(n,m) and max(i) returns a vector containing the maximum value of each
> column. The IDL max command only returns a scalar containing the absolute
> maximum of the array.
>
> I even tried a big loop running through each column to find the max of each,
> but IDL doesnt accept loops with 64000 iterations
>
> What alternatives do I have?
>
> Thomas

Thomas,

Here is another alternative among your choices. I wrote this simple function to mimic Matlab's min function. Just change the occurences of "min" with "max" and you'll have what you are looking for.

Amara

```
FUNCTION WMMIN, array, ind
;+
;NAME:
;       WMMIN
;
;PURPOSE:
;       To find the minimum elements of an array or matrix. This
;       function works the same way as Matlab's MIN: [y,ind]=min(array)
;
;CATEGORY:
;       Math.

;CALLING SEQUENCE:
;       Result = WMMIN(array, ind)
;
;INPUTS:
;       Array:  The data array.
;
;OUTPUTS:
```

```
;       Result =
;               WMMIN returns the lowest value of an array, or if the
array
;               is a matrix, it returns the lowest value of each
*column* in
;               the matrix.
;       ind = the index of the lowest value(s).
;
;NOTES: IDL's array indices are one less than Matlab's.
;
;EXAMPLE:
;       >array=[[1,3,2],[6,3,4],[9,1,0]]
;       >print, array
;       1       3       2
;       6       3       4
;       9       1       0
;       y= WMMIN(array, ind)
;       >print, y
;       1     1     0
;       >print, ind
;       0     2     2
;
;MODIFICATION HISTORY:
;       Amara Graps, BAER, San Francisco, December 1994.
;       Amara Graps, Multiplex Answers, Heidelberg, April 1999.
;           Modified to handle "degenerate" matrices (0 length in one
dimen)
;-

array = REFORM(array)   ;eliminates the "degenerate" dimension(s)

t = SIZE(array)

IF t(0) eq 1 THEN BEGIN
        ;1D array
        minval = MIN(array)
        ind = !c
ENDIF ELSE BEGIN
        ;Matrix
        numcol = t(1)           ;number of columns
        numrow=t(2)             ;number of rows

        minval = FLTARR(numcol)
        ind = FLTARR(numcol)

        ;Step through the cols, and find the mins of the columns
        ;(the way Matlab does it)
        FOR i = 0L, numcol-1 DO BEGIN
```

```
            tt = array(i,*)
            minval(i) = MIN(tt)
            ind(i) = !c

        END     ;i

ENDELSE

!c = 0
RETURN, minval
END
 ;************************************************************ *************
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"Never fight an inanimate object." - P. J. O'Rourke