Subject: Re: How to spot maximum x value AND corresponding y value?
Posted by penteado on Tue, 16 Feb 2010 15:26:56 GMT
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On Feb 16, 10:23 am, "M." <markus_men...@yahoo.de> wrote:
> I have an input file (ascii) containing coordinate data (three
> columns; x, y, z).
> I want to compute a vector from one point to another. I know the
> vector should go from the maximum x value to the minimum y value (or
> vice versa). I took the FLOAT function to find out the min and max
> values. But how can I find out the corresponding x and y values for my
> y_min and x_max values?

Your question is not very clear, but I am guessing that what you want
is to find out which points have the maximum/minimum x and y values.
Which would be something like:

x_max_val=max(x,x_max_ind,min=x_min_val,subscript_min=x_min_ ind)
y_max_val=max(y,y_max_ind,min=y_min_val,subscript_min=y_min_ ind)

Which would give you the maximum value of x in x_max_val and the index
where that occurs in x_max_ind. That is,
x_max_val==x[x_max_ind]==max(x).

Subject: Re: How to spot maximum x value AND corresponding y value?
Posted by M. on Thu, 18 Feb 2010 12:19:38 GMT
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On Feb 16, 4:26 pm, pp <pp.pente...@gmail.com> wrote:
> On Feb 16, 10:23 am, "M." <markus_men...@yahoo.de> wrote:
>
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>> columns; x, y, z).
>> I want to compute a vector from one point to another. I know the
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> y_max_val=max(y,y_max_ind,min=y_min_val,subscript_min=y_min_ ind)
>
> Which would give you the maximum value of x in x_max_val and the index

> where that occurs in x_max_ind. That is,
> x_max_val==x[x_max_ind]==max(x).

Uh, that's true. The question was really not clear. I'm not yet firm with scientific terms and IDL language...
But you guessed right and helped me a lot. What I need are two points in a coordinate system, one point has the the maximum x value and one point has the minimum y value. With your suggestion I now know where the min or max values are located in my array. Good.
But:
My data (ascii) is build like a table (3 columns - 1st col = x coordinates; 2nd col = y coordinates; 3rd col = z values and about 1.5 Million rows each column). So I know, with your suggestion, that my x_max_val let's say is located in the 7th row in the 1st col. BUT, how can I find out which y value (2nd col) is in the 7th row. Since these are coordinates I need both the maximun x value and where it occurs on the y axis - that is what I mean with corresponding value. Is there an order like: "result = (y) value in the 2nd col which is located where x_max_val occurs" OR "result = value in the 2nd col which is located at 'x_max_ind'" -->see above .
I tried to find it out by myself, but I just don't know the right command I think.
Can anybody understand what I mean and help me? Thanks.
Markus

P.S. here is how my array looks:

array = FLTARR(3, n)
array[0,*] = 1st col with x values from ascii text file
array[1,*] = 2nd col with y values from ascii text file
array[2,*] = 3rd col with z values from ascii text file

Subject: Re: How to spot maximum x value AND corresponding y value?
Posted by David Fanning on Thu, 18 Feb 2010 13:29:32 GMT
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M. writes:

> So I know, with your suggestion, that my
> x_max_val let's say is located in the 7th row in the 1st col. BUT, how
> can I find out which y value (2nd col) is in the 7th row.

You know what you need? More coffee. Your brain is not activated yet this morning! I would guess the y value you are looking for is also in the 7th row. If fact, the z value that goes with that x value

is *also* in the 7th row! :-)

```
x = array[0,7]
y = array[1,7]
z = array[2,7]
```

But, even when you get this sorted out, your troubles
are only beginning. I think you are going to have to
re-think (get a LOT of coffee!!) your original premise
on how to attached these points together. It's a lot
harder to do this correctly than you imagine. :-)

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.")
