Subject: Re: Using value_locate with a non-monotonic vector! And it's working!??!
Posted by David Fanning on Sun, 31 Dec 2006 14:52:49 GMT
View Forum Message <> Reply to Message

Gianguido Cianci writes:

> I am just worried that by not using value_locate as the RSI/ITTVIS
> people intended I might be getting my self into trouble.
>
> Any advice?

I think you are right to worry. I'd be VERY worried. :-)

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: Using value_locate with a non-monotonic vector! And it's working!??!
Posted by cgguido on Sun, 31 Dec 2006 23:07:04 GMT
View Forum Message <> Reply to Message

> I think you are right to worry. I'd be VERY worried. :-)

As sometimes happens when the Coyote speaks, I am having trouble discerning between whether I should worry about the RSI/ITTVIS folk knowing some folks who could 'get to me' if I misuse their code ;-) or whether I should worry because my code might explode in my face...

Anybody know which is more likely?

Gianguido

Subject: Re: Using value_locate with a non-monotonic vector! And it's working!??!
Posted by David Fanning on Mon, 01 Jan 2007 01:20:33 GMT
View Forum Message <> Reply to Message

Gianguido Cianci writes:

> As sometimes happens when the Coyote speaks, I am having trouble

> discerning between whether I should worry about the RSI/ITTVIS folk
> knowing some folks who could 'get to me' if I misuse their code ;-) or
> whether I should worry because my code might explode in my face...
>
> Anybody know which is more likely?

Let me put it this way. If I were going near an unsorted
vector with VALUE_LOCATE, I would be SURE I was wearing
my safety goggles and heavy gloves. :-)

Happy New Year!!

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: Using value_locate with a non-monotonic vector! And it's working!??!
Posted by btt on Tue, 02 Jan 2007 17:12:28 GMT
View Forum Message <> Reply to Message

Gianguido Cianci wrote:
> Hi all,
>
> I am using value_locate on a unsorted vector and I am a little worried
> because the IDL manual does not really say what happens in that case. I
> would greatly appreciate your opinion and suggestions...
>
> Say I have an unsorted vector of non-unique sparsely distributed
> numbers a:
>
> a=[4.3, 4.3, 2.1, 10000,2.1]
>
> and I want to create a 1 to 1 map to a list of consecutive numbers that
> indicate ranking...
> What I do is:
>
> b=a[uniq(a,sort(a))]
> c=value_locate(b,a)
> print, c
> 1 1 0 2 0
>
> the variable c is exactly what I want in this case.
>
> The arrays I am going to deal with are much longer (10x1e6 elements) so

> i can't really check them...
>

Hi,

You are right that VALUE_LOCATE requires that the first argument be monotonic, but the second is not subject to the same requirement. What you have shown is that your first argument (b) is monotonic... at least it looks right to me.

That is a pretty big array that you will be searching. You might search a recent discussion about how efficient VALUE_LOCATE is compared to a fixed look-up table. (I think it was Greg Michael who posted the original question.) VALUE_LOCATE repeatedly cuts the vector (in this case b) in half as it works to narrow down the 'width' of the search area. That is pretty quick - but it will still have to do that for every element in your second argument (a).

Ben

Subject: Re: Using value_locate with a non-monotonic vector! And it's working!??!
Posted by cgguido on Thu, 04 Jan 2007 02:23:09 GMT
View Forum Message <> Reply to Message

Hi Ben,

you are absolutely right: I just did not read the manual carefully enough :-(Sorry everyone...

Also, I will look into fixed look-up tables! thanks for the advice!

Gianguido

Ben Tupper wrote:
> Hi,
>
> You are right that VALUE_LOCATE requires that the first argument be
> monotonic, but the second is not subject to the same requirement. What
> you have shown is that your first argument (b) is monotonic... at least
> it looks right to me.
>
> That is a pretty big array that you will be searching. You might search
> a recent discussion about how efficient VALUE_LOCATE is compared to
> a fixed look-up table. (I think it was Greg Michael who posted the
> original question.) VALUE_LOCATE repeatedly cuts the vector (in this
> case b) in half as it works to narrow down the 'width' of the search

> area. That is pretty quick - but it will still have to do that for every
> element in your second argument (a).
>
> Ben
