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Subject: Re: moving average of a large array  
Posted by [Kenneth P. Bowman](#) on Fri, 24 Nov 2006 03:58:02 GMT  
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In article <1164296828.559622.31580@m7g2000cwm.googlegroups.com>, "Jenny" <envi35@yahoo.ca> wrote:

> Hi, I want to calculate the moving average of a large array:  
> data[800,800,365]. The moving average is for the 3rd dimension - day of  
> year. But TS\_SMOOTH only works for a vector. Anyone knows if there is  
> another function in IDL that I could use? I probably can use TS\_SMOOTH  
> and for loops to get this, but it will be slow. In addition, there are  
> invalid data in my array as well.  
>  
> I've read discussions in this list about adding Dimension and NAN  
> keywords to other functions, such as Total, Median, etc., which are  
> very useful. Why nobody cares about TS\_SMOOTH? Or am I asking a silly  
> question? Is there an obvious way to calculate the moving average of a  
> large array?  
>  
>  
> Thanks,  
> Jenny

If x = FLTARR(800, 800, 365)

try

y = SMOOTH(x, [1, 1, 3])

This runs a boxcar smoother, which has awful spectral characteristics.  
You also might want to consider what to do at the edges.

Ken Bowman

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Subject: Re: moving average of a large array  
Posted by [envi35@yahoo.ca](#) on Fri, 24 Nov 2006 14:46:46 GMT  
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Hi, thanks for you reply. I must have been blinded not seeing SMOOTH  
can be used instead of TS\_SMOOTH for multi-dimension array!!

Jenny

Kenneth P. Bowman wrote:

> In article <1164296828.559622.31580@m7g2000cwm.googlegroups.com>,  
> "Jenny" <envi35@yahoo.ca> wrote:

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> This runs a boxcar smoother, which has awful spectral characteristics.  
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>  
> Ken Bowman

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Subject: Re: moving average of a large array  
Posted by [David Fanning](#) on Fri, 24 Nov 2006 15:08:06 GMT  
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Jenny writes:

> Hi, thanks for you reply. I must have been blinded not seeing SMOOTH  
> can be used instead of TS\_SMOOTH for multi-dimension array!!

Well, I think you might want to be a bit careful here,  
as the "smoothing" carried out by TS\_SMOOTH is not the  
same as the "smoothing" implemented by SMOOTH, I think.  
Just be sure you know what you are doing. :-)

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.")

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Subject: Re: moving average of a large array  
Posted by [envi35@yahoo.ca](mailto:envi35@yahoo.ca) on Fri, 24 Nov 2006 16:17:37 GMT  
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Hi David,  
Thanks for your kind reminder! I see they are not the same. What I really want is a 5 or 7 point moving average of the 3rd dimension of my array. Why couldn't they add the convenient arguments/keywords to TS\_SMOOTH?!

Good day,  
Jenny

David Fanning wrote:

> Jenny writes:

>

>> Hi, thanks for you reply. I must have been blinded not seeing SMOOTH  
>> can be used instead of TS\_SMOOTH for multi-dimension array!!

>

> Well, I think you might want to be a bit careful here,  
> as the "smoothing" carried out by TS\_SMOOTH is not the  
> same as the "smoothing" implemented by SMOOTH, I think.  
> Just be sure you know what you are doing. :-)

>

> Cheers,

>

> David

> --

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Subject: Re: moving average of a large array  
Posted by [David Fanning](#) on Fri, 24 Nov 2006 16:27:26 GMT  
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Jenny writes:

> Thanks for your kind reminder! I see they are not the same. What I

> really want is a 5 or 7 point moving average of the 3rd dimension of my  
> array. Why couldn't they add the convenient arguments/keywords to  
> TS\_SMOOTH?!

Maybe they will when you ask you ask them nicely. :-)

Most programs are written with a particular purpose in mind. But anyone who has shared programs with the world quickly comes to realize that either (A) people can't read the documentation, or (B) people could care less about the documentation and want to use the program for their own purposes anyway. It's an eye-opening experience.

Over time you get a little better at anticipating how people are going to use/abuse your programs and you make allowances for that in your coding. But only a savant could see all the possibilities. :-)

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.")

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Subject: Re: moving average of a large array  
Posted by [David Fanning](#) on Fri, 24 Nov 2006 16:30:49 GMT  
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David Fanning writes:

> Maybe they will when you ask you ask them nicely. :-)

Humm. I'm getting so used to hitting the ;;; key multiple times to get it to work that now I see I'm typing whole phrases multiple times. Maybe it's time to make that trip to Circuit City to get a new keyboard. :-)

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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Subject: Re: moving average of a large array  
Posted by [Paul Van Delst\[1\]](#) on Mon, 27 Nov 2006 17:21:59 GMT  
[View Forum Message](#) <> [Reply to Message](#)

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David Fanning wrote:

> Jenny writes:

>

>> Thanks for your kind reminder! I see they are not the same. What I  
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> mind. But anyone who has shared programs with the world  
> quickly comes to realize that either (A) people can't  
> read the documentation, or (B) people could care less  
> about the documentation and want to use the program for  
> their own purposes anyway. It's an eye-opening experience.

>

> Over time you get a little better at anticipating how  
> people are going to use/abuse your programs and you make  
> allowances for that in your coding. But only a savant could  
> see all the possibilities. :-)

Or you could label your code as opinionated software. See:  
<http://tinyurl.com/7ojc8>

A small quote:

<quote>

Rails is opinionated software. It eschews placing the old ideals of software in a primary position. One of those ideals is flexibility; ½the notion that we should try to accommodate as many approaches as possible, that we shouldn't pass judgement on one form of development over another.

</quote>

cheers,

paulv

--

Paul van Delst            Ride lots.  
CIMSS @ NOAA/NCEP/EMC

Eddy Merckx

Ph: (301)763-8000 x7748  
Fax:(301)763-8545

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Subject: Re: moving average of a large array  
Posted by [David Fanning](#) on Mon, 27 Nov 2006 17:32:17 GMT  
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Paul van Delst writes:

> Or you could label your code as opiniated software.

I just take it for granted that anyone who downloads software from my web page knows it's opinioned software. Otherwise, what's the point? :-)

Cheers,

David

--

David Fanning, Ph.D.  
Fanning Software Consulting, Inc.  
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Sepore ma de ni thui. ("Perhaps thou speakest truth.")

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