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Subject: Locating SMOOTH in IDL library

Posted by [vaibhavpant55](#) on Wed, 03 Dec 2014 08:45:43 GMT

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Hi all,

I am trying to smooth an image using SMOOTH function in IDL. However i want to see how the SMOOTH routine is written because when I tried to write the routine myself, it takes a bit longer time than SMOOTH function. I tried to search for it in IDL lib but i couldn't locate it. Same is true for convolution (CONVOL) and FFT. Can anyone tell where these functions are located in IDL libraries ?

Vaibhav Pant

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Subject: Re: Locating SMOOTH in IDL library

Posted by [Sergey Anfinogentov](#) on Wed, 03 Dec 2014 09:38:00 GMT

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They don't use direct convolution

They do something like this code

```
temp = total(x, /CUMULATIVE)
```

```
result = shift(temp,n)- temp
```

The example is 1d, but it is possible to do the same thing in 2d and 3d

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Subject: Re: Locating SMOOTH in IDL library

Posted by [vaibhavpant55](#) on Wed, 03 Dec 2014 10:35:31 GMT

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On Wednesday, December 3, 2014 3:08:02 PM UTC+5:30, Sergey Anfinogentov wrote:

> They don't use direct convolution

> They do something like this code

>

> temp = total(x, /CUMULATIVE)

> result = shift(temp,n)- temp

>

> The example is 1d, but it is possible to do the same thing in 2d and 3d

Thanks for the reply. It is a nice trick.

Still would like to know where these routines are present in IDL library. If anyone has any idea please do let me know?

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Subject: Re: Locating SMOOTH in IDL library

Posted by [Fabzi](#) on Wed, 03 Dec 2014 10:44:02 GMT

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On 03.12.2014 11:35, Vaibhav Pant wrote:

> Still would like to know where these routines are present in IDL library.

They are likely written in C, and they are probably shipped compiled and protected, to avoid that people look into it...

Cheers,

Fabien

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Subject: Re: Locating SMOOTH in IDL library

Posted by [Phillip Bitzer](#) on Wed, 03 Dec 2014 14:43:41 GMT

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On Wednesday, December 3, 2014 2:45:48 AM UTC-6, Vaibhav Pant wrote:

> Hi all,

> I am trying to smooth an image using SMOOTH function in IDL. However i want to see how the SMOOTH routine is written because when I tried to write the routine myself, it takes a bit longer time than SMOOTH function. I tried to search for it in IDL lib but i couldn't locate it. Same is true for convolution (CONVOL) and FFT. Can anyone tell where these functions are located in IDL libraries ?

>

> Vaibhav Pant

Seems to me this provides what Smooth does:

<http://exelisvis.com/docs/SMOOTH.html>

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