Subject: Re: Piecewise curve fitting in idl
Posted by Wox on Thu, 31 Jul 2008 11:21:33 GMT
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On Thu, 31 Jul 2008 03:30:22 -0700 (PDT), d.poreh@gmail.com wrote:

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Subject: Re: Piecewise curve fitting in idl
Posted by d.poreh on Thu, 31 Jul 2008 11:54:36 GMT
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On Jul 31, 1:21 pm, Wox <nom...@hotmail.com> wrote:
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Subject: Re: Piecewise curve fitting in idl
Posted by jameskuyper on Thu, 31 Jul 2008 12:39:09 GMT

d.poreh@gmail.com wrote:
> On Jul 31, 1:21 pm, Wox <nom...@hotmail.com> wrote:
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Identifying the different parts is up to you. How do you know that there are 2-3 different trends? Whatever method you use to reach that conclusion will have to be adequate to identify where the different trends start and end. However, once you have identified the different parts you want fit separately, fitting each one separately is trivial: pass x[trend_start[i]:trend_end[i]] and y[trend_start[i]:trend_end[i]] to the curve-fitting routine.

If you want a curve fitting routine that automatically figures out where each trend starts and ends, then it gets a LOT more complicated. You could do that by using a non-linear curve fitting routine, and make the transition point between the two trends be one of the parameters of your fitting curve. However, I would strongly recommend trying to understand why you see 2 or 3 different trends, and then try to come up with a single mathematical model for the entire curve that reflects that reason. Then fit that model to your data.

Subject: Re: Piecewise curve fitting in idl
Posted by d.poreh on Thu, 31 Jul 2008 14:00:21 GMT

On 31 Jul., 05:39, James Kuyper <jameskuy...@verizon.net> wrote:
> d.po...@gmail.com wrote:
>> On Jul 31, 1:21 pm, Wox <nom...@hotmail.com> wrote:
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how we can do this in Iplot?

Subject: Re: Piecewise curve fitting in idl
Posted by David Fanning on Thu, 31 Jul 2008 14:03:21 GMT
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d.poreh@gmail.com writes:

> how we can do this in Iplot?

This is so much better than one of those serialized novels!!

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: Piecewise curve fitting in idl
Posted by Paul Van Delst[1] on Thu, 31 Jul 2008 14:31:37 GMT
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d.poreh@gmail.com wrote:
>
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Goodness. I think you need to (re)start using Matlab. The IDL gui's don't offer anything similarly sophisticated. Blood, sweat, and tears are still the order of the day to use IDL effectively - which, lest readers get confused, is sometimes A Good Thing, IMO. If the gui does most of the work, the new user doesn't really learn anything.

Reminds me of that Star Trek movie where they went back in time to the '80s where Scottie sat in front of a Macintosh, said "Computer", and then waited for a reply.

Ahhh, good times good times....

cheers,

paulv

Subject: Re: Piecewise curve fitting in idl
Posted by pgrigis on Thu, 31 Jul 2008 14:41:19 GMT
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d.po...@gmail.com wrote:
> On 31 Jul., 05:39, James Kuyper <jameskuy...@verizon.net> wrote:
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how can we tighten a screw with a toothbrush?

Paolo

Subject: Re: Piecewise curve fitting in idl
Posted by jameskuyper on Thu, 31 Jul 2008 14:58:48 GMT
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d.poreh@gmail.com wrote:
> On 31 Jul., 05:39, James Kuyper <jameskuy...@verizon.net> wrote:
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I don't have any idea. Iplot is a plotting routine, not a curve fitting routine, so I wouldn't expect it to be possible at all; but I'm not very familiar with Itools, so I could be mistaken.

Subject: Re: Piecewise curve fitting in idl
Posted by Wox on Fri, 01 Aug 2008 08:27:20 GMT
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On Thu, 31 Jul 2008 07:00:21 -0700 (PDT), d.poreh@gmail.com wrote:

<snip>
> how we can do this in Iplot?

Just checked iplot and Dave was right, you can tighten a screw with a toothbrush: "Operations > Filter > Curve Fitting". This is using CURVEFIT (check idlitopcurvefitting__define.pro).

As for your piecewise fitting Dave, you will have to call curvefit (or another fitting routine) outside iplot.

Subject: Re: Piecewise curve fitting in idl
Posted by Craig Markwardt on Mon, 04 Aug 2008 04:58:20 GMT
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d.poreh@gmail.com writes:

> On Jul 31, 1:21ï¿½pm, Wox <nom...@hotmail.com> wrote:
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I realize I'm coming into this discussion late. However, the IDL
Astronomy library has a nice procedure LINTERP which would be very
useful for an application like this. It would still need to be
interfaced to a fitting function. It would allow you to fit the
tabulated Y values, and in principle even the tabulated-X positions,
although I would NOT advise that.

For a graphical interface, IDL is probably not the best application
unless you want to write the whole program yourself.

Craig

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Craig B. Markwardt, Ph.D. EMAIL: craigmnet@REMOVEcow.physics.wisc.edu
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
--- ----------