Subject: Re: MPFIT2DFUN- use for a time series of images?
Posted by Gray on Thu, 10 Mar 2011 20:27:59 GMT
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On Mar 10, 3:01 pm, Katie <kmwhite21...@gmail.com> wrote:
> I want to fit pixel values to a logistic model that each have X, Y
> coordinates and a day of the year value associated with them. I see
> from the MPFIT2DFUN documentation how to define X, Y for a each Z
> dependent value and the dependent error value, but can a third
> variable (day of the year in this case) be defined in order to fit a
> curve in MPFIT2DFUN? I currently have each each date as a separate
> band in a stacked image file that I exported as an ASCII file. I want
> to determine the day of the year that the pixel values (vegetation
> indices) reach a value on the the curve.
>
> Any suggestions, or perhaps I am not understanding the MPFIT2DFUN
> correctly (I am very new to IDL)?

Well, you're trying to fit 3d data with a 2d function. I would look
at mpfitfun or just mpfit.

Subject: Re: MPFIT2DFUN- use for a time series of images?
Posted by Allard de Wit on Fri, 11 Mar 2011 12:49:56 GMT
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On Mar 10, 9:01 pm, Katie <kmwhite21...@gmail.com> wrote:
> I want to fit pixel values to a logistic model that each have X, Y
> coordinates and a day of the year value associated with them. I see
> from the MPFIT2DFUN documentation how to define X, Y for a each Z
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> indices) reach a value on the the curve.
>
> Any suggestions, or perhaps I am not understanding the MPFIT2DFUN
> correctly (I am very new to IDL)?

Katie,

You will need to iterate over the rows and columns of your image and
fit
the logistic model to the time-series at each row/column value.
Indeed, MPFITFUN is one of the tools to do that.

A couple of years ago I implemented this approach for use with the

GIMMS
dataset. In fact it uses a double logistic model to model the NDVI
time-series. My implementation does not include a variable day-of-year
(just regular time-steps) but this is a trivial extension. It also
uses IDLs native Curve_Fit routine rather then MPFITFUN, although the
latter is better.

If you're interested I can send you a copy of that code.

Allard

Subject: Re: MPFIT2DFUN- use for a time series of images?
Posted by Katie[1] on Fri, 11 Mar 2011 14:47:19 GMT
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On Mar 11, 7:49 am, Allard de Wit <ajwde...@xs4all.nl> wrote:
> On Mar 10, 9:01 pm, Katie <kmwhite21...@gmail.com> wrote:
>
>> I want to fit pixel values to a logistic model that each have X, Y
>> coordinates and a day of the year value associated with them. I see
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> dataset. In fact it uses a double logistic model to model the NDVI
> time-series. My implementation does not include a variable day-of-year
> (just regular time-steps) but this is a trivial extension. It also
> uses IDLs native Curve_Fit routine rather then MPFITFUN, although the
> latter is better.
>
> If you're interested I can send you a copy of that code.

>
> Allard

Thanks Gray and Allard, that makes more sense, I will look at
MPFITFUN-- and yes Allard it would be extremely helpful to be able to
look at the copy of your code!

Katie

Subject: Re: MPFIT2DFUN- use for a time series of images?
Posted by Allard de Wit on Mon, 14 Mar 2011 13:46:22 GMT
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>> Allard
>
> Thanks Gray and Allard, that makes more sense, I will look at
> MPFITFUN-- and yes Allard it would be extremely helpful to be able to
> look at the copy of your code!
>
> Katie

Katie,

I have put a package on our public ftp server:
ftp://sc:Image188@ftp.alterra.nl/pub/adewit/idlsigmoid.zip

It contains the following files:
fit_phenology_gimms.pro - a wrapper I used to run it over GIMMS (needs
ENVI)
fit_sigmoid.pro - a wrapper for sigmoid fitting
fsigmoid.pro - double sigmoid defined as a function
psigmoid.pro - double sigmoid defined as a procedure
test_fit_sigmoid_curvefit.pro - curve fitting using curvefit
test_fit_sigmoid_mpfit.pro - curve fitting using mpfitfun

Some test profiles, needed by the test* routines
test_ndvi_zprofile2.sav
test_ndvi_zprofile3.sav
test_ndvi_zprofile4.sav
test_ndvi_zprofile5.sav

Cheers

Allard

Subject: Re: MPFIT2DFUN- use for a time series of images?
Posted by sawaid.abbas on Fri, 21 Feb 2014 04:23:13 GMT
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On Monday, March 14, 2011 9:46:22 PM UTC+8, Allard de Wit wrote:
>>> Allard
>>
>> Thanks Gray and Allard, that makes more sense, I will look at
>> MPFITFUN-- and yes Allard it would be extremely helpful to be able to
>> look at the copy of your code!
>>
>> Katie
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> Katie,
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> I have put a package on our public ftp server:
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> Some test profiles, needed by the test* routines
> test_ndvi_zprofile2.sav
> test_ndvi_zprofile3.sav
> test_ndvi_zprofile4.sav
> test_ndvi_zprofile5.sav
>
> Cheers
>
> Allard

Dear Allard,

I need your codes for curve fitting.
Currently I can not download it.
I also need your suggestion about my work.
I want to extract pheno-pauses from NDVI time-series.
I after fitting curve, I need to extract time of phenology according to a fixed NDVI values that is different for every pixel.
Need your suggestions guys.
New to IDL also,

Regards
Sawaid