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Subject: Re: alternative to CURVEFIT function

Posted by [Craig Markwardt](#) on Thu, 30 May 2013 01:39:08 GMT

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On Wednesday, May 29, 2013 11:19:27 AM UTC-4, fd\_...@mail.com wrote:

> I was wondering if anyone knows an alternative function of CURVEFIT. If I am not mistaken the CURVEFIT uses the Levenberg-Marquart algorithm. I need to use a different algorithm which provides a numerical solution to the problem of minimising a function, generally non-linear.

>

> Nelder-Mead method and Newton-Raphson are some choices but I was wondering if there is a function in IDL like the CURVEFIT.

Adding to what the other posters said...

If you can any way express your function as the sum of squared residuals, then you should try to use the MPFIT family of functions. It is far more stable than CURVEFIT.

Note that you can sometimes bend the rules. If your optimization function is the sum of \*somethings\*, then often you can rewrite the somethings as (somethings elses)^2. As long as (something else) is signed, you can use MPFIT.

If you really need general function minimization, then yes you can try my TNMIN. If your user function is smooth then it will find a minimum with a Newton-type method.

Craig

<http://cow.physics.wisc.edu/~craigm/idl/fitting.html>

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