

Re: How to minimize the absolute sum in curve fitting?

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Thank you, everyone!

I cannot use any software package or human judgement for this curve fitting, since I need to put this into a C routine to run on a device.

Many thanks to those who recommended "Iteratively Reweighted Least Squares" and "Least Median Squares". Joel's article is very very helpful too.

By the way, is there really no closed form solution for the "Least Absolute Deviation" method?

I have improved the standard deviation of the estimated mean by 20% by simply stripping some outliers. (This curve fitting is done many times over time in the device, and I need the results to be as consistent as possible without sacrificing accuracy.) Next I am going to try "weighted least squares" first because it is quite easy to implement.

My main aim is to reduce the standard deviation of the estimated mean by 90%. (I don't have a good model about the noise in the data, so I am going to test a bunch of algorithms.) I will post here again if I achieve that.

Best Regards.

K