
Subject: Re: Weighted linear fitting?

Posted by [rosentha](#) on Wed, 27 May 1998 07:00:00 GMT

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On 27 May 1998 16:30:37 GMT,

Marcus E Engdahl <mengdahl@alpha.hut.fi> wrote:

>

> weights = 1/ystd^2 = [1426.78, 143.309, 72.5688, 574.851]

>

> It seems that the weights for the first and last data point are very much

> bigger than for the middle data points and the line fit practically almost

> ignores the middle observations. Is this a characteristic of the Gaussian

> weighing scheme or am I determining the weights incorrectly?

This sounds correct to me. Remember that this is least _squares_ so you're actually minimizing $[\text{abs}(y-y_i)/\sigma]^2$, so somehow you're trying to minimize $\text{abs}(y-y_i)$ scaled by σ . Hence you're not ignoring the middle points as completely as you might imagine from looking at the values of $1/ystd^2$.

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