
Subject: Re: Newbie's question

Posted by [Paolo Grigis](#) on Thu, 20 Oct 2005 07:33:33 GMT

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ChiChiRuiz@gmail.com wrote:

> Hi there,

>

> I have a scatter plot which has the shape of a parabola, like $y=x^2$.

> I want to find the best curve fit to the scatter plot, so I used the

> function "curvefit" with no weights and with initial guesses (1.0, 2.0)

> i.e. $y = 1.*x^{(2.)}$. So, here's the problem...when I use only the right

> half of the data points (i.e. x and y values are positive), I get the

> curvefit returns parameter (0.5, 1.5), which means, the best fit curve

> is $y=.5*x^{(1.75)}$. I know the fit should be symmetric, so the same curve

> SHOULD fit the other half. Now onto the left half side of the data

> set, curvefit does not work anymore, and here's why, $x^{(1.5)}=x^{(3/2)}$

> and when x is a negative number, IDL returns "NaN" because it can't

> take the square root of a negative number, hence the entire procedure

> will not work. I ended up having to throw away half of my data points,

> and I'm not very comfortable with that. Any idea how to go around it

> or suggest another function to do the same thing?

What about fitting the data to the function $a*abs(x)^b$?

Paolo

>

> Besides, I've thought about using "polyfit", but if I remember

> correctly, polyfit only takes in one x value vs. one y value. Scatter

> plot has one x value vs. several y values. I don't think it'll

> work in my case, but I may be wrong...

>

> TIA (thanks in advance)

>

> Angie

>
