
Subject: Re: Interpolation question

Posted by [mchinand](#) on Wed, 02 Aug 2006 16:37:09 GMT

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In article <12d1k3ah497rj6c@corp.supernews.com>,
Mike Wallace <mwallace.no.spam.please@swri.edu.invalid> wrote:
> I have an array that I need to interpolate and would like to find a
> semi-efficient way to do it. Well, almost anything would be more
> efficient than what I'm currently doing.
>
> I have an array of data and a corresponding array of times when the data
> was taken. I have a third array that represents the times that I want
> to calculate the interpolation. How can I easily (and efficiently)
> calculate the data points corresponding to that array?
>
>
> For example...
>
> data = [12, 6, 1, 4, 8, 8, 10]
> time = [0, 1, 4, 7, 8, 11, 14]
>
> Now, I say that I wanted to interpolate the data array but only
> calculate the interpolation for the time values in some new array...
>
> new_time = [1, 4, 5, 8, 9, 12]
>

Check out INTERPOL:

```
IDL> new_data=interpol(data,time,new_time)
IDL> print, new_data
      6.00000      1.00000      2.00000      8.00000      8.00000      8.66667
```

I changed the data array to float, otherwise the resulting new_data array is Integer type which you may or may not want. INTERPOL has different interpolation types to choose from, linear, quadratic, or spline.

Hope that helps,

--Mike

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