
Subject: Interpolation question

Posted by [Mike Wallace](#) on Wed, 02 Aug 2006 16:21:55 GMT

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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]
```

Right now, I'm looping over the new_time array, finding the indexes where the new_time value falls, and doing a simple weighted average. I just have a gut feeling that there's a better way. TIA,

Mike
