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Subject: 4D interpolation

Posted by [amin farhang](#) on Sun, 22 Nov 2015 19:10:21 GMT

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Dear all,

I want to interpolate the temperature in a 3D Cartesian grid.

I have the below data:

x = [1,2,3,4,5,6]

y = [.1,.2,.3,.4,.5,.6]

z = [10,20,30,40,50,60]

f = [ 1, 0, 0.255654, 0, 0, 0.0322785]

and now how i could interpolate the f temperature at where it is zero, i.e. at the 1,3 and 4 indexes?

Best regards,

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Subject: Re: 4D interpolation

Posted by [Jeremy Bailin](#) on Thu, 31 Dec 2015 19:56:57 GMT

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On Sunday, November 22, 2015 at 2:10:24 PM UTC-5, Amin Farhang wrote:

> Dear all,

>

> I want to interpolate the temperature in a 3D Cartesian grid.

> I have the below data:

>

> x = [1,2,3,4,5,6]

> y = [.1,.2,.3,.4,.5,.6]

> z = [10,20,30,40,50,60]

> f = [ 1, 0, 0.255654, 0, 0, 0.0322785]

>

> and now how i could interpolate the f temperature at where it is zero, i.e. at the 1,3 and 4 indexes?

>

> Best regards,

This is just trilinear interpolation, not 4D, so the built-in INTERPOLATE function should work fine.

This prompts me to ask, though -- why does interpolate only function up to 3D? No reason it shouldn't be extensible to an arbitrary number of dimensions (or at least to the 8 maximum array dimensions).

-Jeremy.

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