Subject: Re: what is the best way to do a surface (or 2D) interpolation?
Posted by Vince Hradil on Tue, 23 Sep 2008 17:14:53 GMT
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On Sep 23, 11:54 am, Brian Larsen <balar...@gmail.com> wrote:
> I think what you are looking for is krig2d. Look it up in help. The
> only annoyance is that it is either looking for a regular grid (which
> I think you have) or x,y,z triplets. I have never figured out how to
> make x,y,z triplets other than using nested for loops to step through
> the points.
>
> From here read the krig2d help and work through the example there and
> see if that solves your issue. If not let me know whats not working
> and I'll see if I can help more.
>
> One word of caution is that interpolation is great "inside" the range
> where you have data, however "outside" the region is extrapolation and
> is fraught with issues. I mean that your x's
> IDL> print,vz
>   -1.62839   -1.23045   -0.628389   -0.327359   0.0483046
> 0.246672
> and the new x's that you want
> newx = [-2.0, -1.5, -1.0, -0.5, 0.0, 0.5]
> some are outside and you need to be a little careful that the answer
> actually makes sense as if often (maybe stronger than often) doesn't.
>
> Cheers,
>
> Brian
>
> --- -------------
> Brian Larsen
> Boston University
> Center for Space Physicshttp://people.bu.edu/balarsen/Home/IDL

Here's a way to get verts:

sz = size(array)
nx = sz[0]
ny = sz[1]
nz = sz[2]
ns = sz[sz[0]+2]
verts = findgen(ns)
verts = transpose([[verts mod nx], [verts/nx mod ny], [verts/nx/
ny]])

BTW, I'd like to find a faster way, if there is one.