Subject: Re: contour of 2D data
Posted by penteado on Wed, 21 Apr 2010 13:59:26 GMT
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On Apr 21, 6:33 am, jimmy <mandril...@yahoo.co.uk> wrote:
> Hi folks,
>
> I have a set of data points in the x,y plane and I would like to do a
> contour plot, to highlight zones where there are more or less points.
> One obvious way of doing it, would be to do a grid, count how many
> points follow in a given grid and then use the contour.
>

Contours show the spatial variation of some variable. In your case, the variable seems to be the density of points. You do no have it initially, all you have is the location of points. So you need to decide how you want to generate a density variable from the locations. The simplest is to use a 2D histogram, which is one case you considered. For that, see IDL's hist_2d, or David's hist_nd (http://www.dfanning.com/documents/programs.html#HIST_ND).

Another possibility is to use a kernel, that will weight the points' addition to the density as a function of their distance from the sampled point (the histogram actually does this, for a rectangular kernel). There are other ways to do it, but the choice depends on what makes more sense to your problem.

> But I was wondering if IDL has already the capability of doing so, by
> avoiding me to go throught the gridding. I though to give to each
> point (x_i,y_i) a weight z_i=1 and then simply
>
> contour,z,x,y,/irregular
>
> but just does not work. Any help?

This defines your z variable as a constant (1), as it has that same variable for every location you provide it. Which makes for a very boring contour plot, and probably not what you want.