Subject: Re: Contouring binary data
Posted by steinhh on Thu, 02 Jun 1994 10:55:32 GMT
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In article <hahn.7.00131ADF@hrz.th-darmstadt.de>, hahn@hrz.th-darmstadt.de (Norbert Hahn) writes:
|> Hi all,
|>
|> I have a matrix with binary data, that is the elements contain either zero or
|> one (or some other numer). If I convert the matrix from bytarr to fltarr and
|> call contour I get some but not all contour lines. Some of them are double
|> or triple lines. When I add ,levels=[0,1] I get single lines but miss even
|> more lines.
|>
|> I guess, IDL assumes some analogue data and tries to find a "slope" or
|> a "gradient" but fails to get all non-zero elements.
|>

If the matrix is, say, 10x10, try:

IDL> contour,congrid(data,200,200),levels=[0,1]

This avoids the problem with IDL interpolating between pixels.

|> The contour lines IDL returns are rather jaggy. How to smooth these lines ?

With the above method, they aren't *smooth* (they're quite square, in fact),
but I think they should be....

Stein Vidar Haugan
Institute of Theoretical Astrophysics,
University of Oslo,
Norway

Subject: Re: Contouring binary data
Posted by sterner on Fri, 03 Jun 1994 16:48:23 GMT
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steinhh@amon.uio.no (Stein Vidar Hagfors Haugan) writes:

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Here is another technique for contouring binary data.

Let b be a 2-d byte array of 0s and 1s.
then
c = smooth(b,3) ne b
gives a byte array in c with only the boundary pixels
being 1, all others are 0.

If the result is too ragged try smoothing b first. Make sure and
convert the smoothed result back to type byte. If array is a floating
point array of 0s and 1s the resulting boundary will be twice as thick.

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