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
- $\mid >$ or triple lines. When I add $\ , \mid evels=[0,1] \ I$ 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:

- > In article <hahn.7.00131ADF@hrz.th-darmstadt.de>, hahn@hrz.th-darmstadt.de (Norbert Hahn) writes:
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- > I> more lines.
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- > If the matrix is, say, 10x10, try:
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- > This avoids the problem with IDL interpolating between pixels.

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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