Subject: Setting up offsets array ...
Posted by Peter Thorne on Wed, 18 Apr 2001 14:10:33 GMT
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Dear all,

after your excellent help last time I thought that I would test the waters again to see whether you can help me on my next problem. You'll all get an acknowledgement in my thesis when (if?) I eventually finish :-). This time I think the problem is really rather trivial I'm afraid (famous last words?) - sorry.

The problem I now have is that I want to set up an offsets array to test the sensitivity to the choice of histogram origin of the solution in my last problem. Therefore, again one is working in space of unknown dimensionality of between 1 and 5, which is known within the program only upon call to it from a higher level program. What I want to be able to do is set up an offsets array so that I can systematically shift the origin over an entire space step in each dimension. For a 1-D problem this is simple:

offsets=(findgen(11)*0.1)-0.5

Which can then be used to force the offset of the 1-D histogram around the true origin by between -0.5 and 0.5 space units in the calling program to JD's excellent hist_nd. The problem is how to generalise this in the program to a potentially higher, and unknown (until call) dimensional space. The number of combinations of shifts will be 11^n, where n is the dimensionality of the histogram space. For a 2-D case the offsets array will look like:

(-0.5,-0.5)
(-0.5,-0.4)
(-0.5,-0.3)
(-0.5,-0.2)
:
:
(-0.4,-0.5)
(-0.4,-0.4)
(-0.4,-0.3)
:
:
(0.5,0.5)

For each extra dimension another column would be added to the array and the number of rows increased by *11. Therefore the offsets array will always be fltarr(n,11^n) in size, it is the filling of this array with the values that is causing me my latest headache :-(

Any ideas as to how to approach this problem will be very gratefully received.

Thanks in advance

Peter
