Subject: Re: array index summations
Posted by Jeremy Bailin on Wed, 30 Dec 2009 04:58:51 GMT
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On Dec 18, 1:48 pm, "H. Evans" <bloggs...@googlemail.com> wrote:
> On Dec 18, 7:35 pm, David Fanning <n...@dfanning.com> wrote:
>
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>
>> H. Evans writes:
>>> The difference is that the histogramming functions count the number of
>>> points in the bins, i.e. the number of points between x and x+width.
>>> Whereas the CONGRID, GRIDDATA, REBIN functions interpolate the data
>>> points to an X-Y grid.
>
>>> This function performs statistics on the contents of the Z vector,
>>> i.e. what is the mean value of the data points in the range x->x+dx,
>>> not how many data points are in the range X->x+dx, which the histogram
>>> function provides. In other words, it finds the data points that are
>>> in the bin, and then sums up the Z values in that bin.
>
>>> If the histogram function provided a weighting function to the
>>> counting, then this could be used to sum the Z values in the bin.
>
>> I'm not following this closely, but I think the point is
>> that HIST_ND could tell you which voxels were in each
>> XY bin, and you could then perform your own statistics
>> or weighting function on those values, however you liked.
>
>> This would reduce the complexity of your code significantly.
>
> Hi,
>
> Finding the indices of the data points in a 2d bin is not the hard
> part. What I'm trying to avoid is having a FOR loop that iterates over
> the bins doing the statistics on the data points that are in a bin.
>
> Ta.
> Hugh

As often seems the case, I think this article might help:

http://www.dfanning.com/code_tips/drizzling.html

-Jeremy.