
Subject: Re: Pair Counts in an Annulus, for large data sets

Posted by [fatcat3131](#) on Fri, 24 Nov 2006 02:47:27 GMT

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Right. And that makes perfect sense to me. The problem is, my "R" data set is relative to some fixed origin "O". And I want to measure a radius "Delta-R" from a data-point R(1), not from O. Then count up the points which lie within "Delta-R" from R(1). Then repeat, measuring Delta-R from R(2) this time. Then from R(N), etc...

So to me, a histogram on R is counting up the points which lie a certain distance from the origin, no?

If you are in fact interpreting the problem correctly already, then I'm really sorry. Just say so and I'll keep going over it until it "clicks"... I just thought you might be thinking I want to measure Delta-R from the Origin, which is not in fact the case.

Thanks for your help!

Tara (still confused!)

David Fanning wrote:

> fatcat3131@gmail.com writes:

>

>> i've been tinkering with things, and i simply don't understand the
>> histogram principle (i even read the tutorial!). would you mind
>> explaining in slightly more detail?

>>

>> it's really not clicking with me how setting the binsize to Delta-R
>> would allow me to count the points which lie in the distances (R to
>> Delta-R) from a point P, and do this for all N points. i am interested
>> in just one Delta-R, and counting the point-point pairs for this
>> Delta-R.

>

> Humm. Let's see. You have a data set containing the
> distance from some point, R. Suppose your delta-R, or
> bin size, is 1. If you run a histogram on R, it will
> tell you how many Rs are in the bin 0 to 1, 1 to 2, etc.
> Moreover, the reverse indices of the histogram will tell
> you which points in R are in each bin.

>

> Suppose, for example, you are interested in which points
> have a radius between 2 and 3 in your R vector.
> This would be the third bin of the histogram:

>

> h = Histogram(R, BINSIZE=1, OMIN=0, REVERSE_INDICES=ri)
> Print, 'Number of points with radius between 2-3: ', h[2]

>
> Now, which points in R are in this bin? That information is contained
> in the reverse indices:
>
> indices_of_R_in_Bin3 = ri[ri[2]:ri[3]-1]
>
> Cheers,
>
> David
> --
> David Fanning, Ph.D.
> Fanning Software Consulting, Inc.
> Coyote's Guide to IDL Programming: <http://www.dfanning.com/>
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")
