Subject: Re: Box-Whisker plots in IDL
Posted by jschwab@gmail.com on Mon, 20 Aug 2007 23:04:14 GMT
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Pardon me if I'm mistaken, but I think these "quartiles with
histogram" examples, including the one that's in JD's histogram
tutorial are fundamentally incorrect.

You are assuming "Equal bin widths" ==> "Equal #'s in each bin" !

When HISTOGRAM splits a data list into N bins, it does so such that
the *width* of the bins are equal. In no way does it somehow create a
situation in which the *number of points* in each bin is equal (which
is what would be required to find quartiles in such a manner).

The given examples have only "worked" because you're either dealing
with uniform distributions (in which case equal bin widths do imply
equal numbers in each bin) or because the example data happens to be
roughly uniform.

If you want to convince yourself, try one of those codes with
data = randomu(seed, 1000) * 100.
and then with
data2 = data * data
The quartiles in the 2nd case should simply be the squares of the
quartiles from the first.

Cheers,
Josiah
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Josiah Schwab
MIT, Course VIII