Subject: maximum number of bins/categories for bar charts
Posted by chemtv on Sat, 07 Jan 2023 04:10:54 GMT
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Hello,
I have a large dataset with near 5000 bins/categories that I would like to plot as a bar chart/histogram. Since I can do this with small example datasets I assume I've exceeded some maximum number of bins/categories allowed. What is the limit for bar charts? Is this the same limit as for category variables? Any way I should be able to figure this out without a lot of trial and error?

Thanks,
Greg

Subject: Re: maximum number of bins/categories for bar charts
Posted by nbehrnd on Sat, 07 Jan 2023 19:45:11 GMT
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Dear Greg,

I think the maximum number of bins the bar chart is capable to display equates to 100,* which is less than the binning algorithm is capable to generate and simultaneously, which is less than the interactive preview (Data -> Add Bins from Numbers) apparently can visualize when adjusting the slide rules.

This suggests the addition of a display, or/and a dial about the number of bins created; a bit similar to what the generation of histograms with e.g. Origin implements.[1] Perhaps complemented with a note to the user («Danger, Will Robinson») if the number of bins computed reached, or exceeds the critical threshold of bins the bar chart still is capable to visualize.

Norwid

[1] https://www.originlab.com/doc/en/Origin-Help/PD-Dialog-Data- Tab

* I had a 5k set at hand, and iteratively progressed by division by 2, rounded to integers somewhat easier to recall. By this approach, 100 bins passed, and 150 bins were too many.

Subject: Re: maximum number of bins/categories for bar charts
Posted by thomas on Wed, 18 Jan 2023 14:16:14 GMT
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Dear Greg and Norwid,

currently, the maximum number of categories on one axis is 256.
The max number of categories on all axes (product of individual axis category counts) is limited to 32768.
In addition one can sub-split categories on any axis with case separation into up to 128 sub-categories.
Then views can be split by 1 or 2 category columns into a maximum of 10000 views.

The limits are there to avoid an explosion of memory usage considering that a higher number of categories usually can not be displayed reasonably well anyway.

Thomas

Subject: Re: maximum number of bins/categories for bar charts
Posted by nbehrnd on Thu, 19 Jan 2023 21:51:31 GMT
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Dear Thomas,

though my test did assigned a maximum threshold of bins below the one set in the program, I still like to retain it were a nice addition if the interactive binning (by move of the sliders) either

a) there were an indicator of the number of bins are going to be created, or/and
b) an optional dial to divide a set into exactly 12, 36, 100, or an other number of bins at the discretion of the user

in the small temporally displayed window (cf. the silent attached) before the eventual click on «ok». In comparison to the adjustments of representations of the 2D/3D plots, the binning is less reversible; once applied to the data in the table, it stays there until an other binning is applied.

With regards,

Norwid

File Attachments
1) binning.mp4, downloaded 611 times