

## On visualising our way around road blocks

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Today's youth have grown up in a highly visual, highly interactive world. It is also a world where there is an explosion in the quantities of data being collected, the settings in which it is being collected, and expansions in the conceptions and scope of what constitutes data. With the data world growing so fast it is entirely inadequate to just keep illuminating the same small part of it that we have traditionally concentrated on. We have to find ways of conveying more of what the data world has to offer and giving a sense that "this will be useful for me". To do this we have to find ways to get students much further, much faster, while operating under the external constraints of not being able to demand no more time on task or that people be able to hold more than a very small number of ideas in their minds simultaneously. Something has to be given away and for me that something is "details". Two of the most important road blocks in the way of faster progress into the world of data are the complexity of statistical software (and what you have to know to be able to use it), and introductions to statistical inference based upon the normal distribution and the Central Limit Theorem. We will talk about some software-facilitated, visualisation-based ways of getting around these roadblocks.

**Key Words:** statistics education, data visualisation, statistical software, resampling inference