

Perception of probability: draw the boxplot

David Zelený & Po-Ju Ke

Introduction

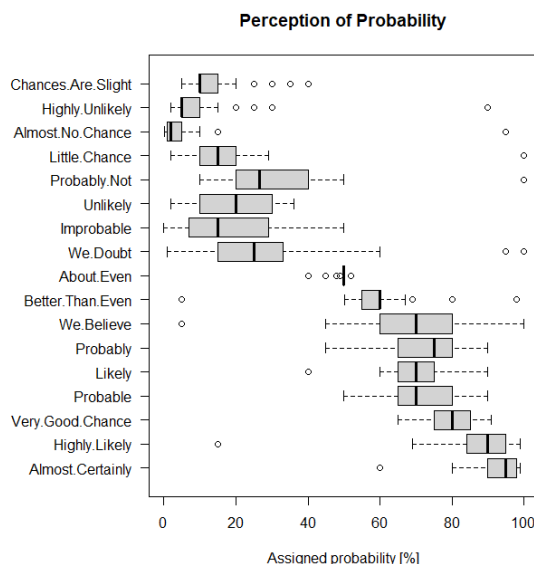
Sherman Kent, an important CIA officer, once wrote in his report that:

in an experiment with 23 NATO military officers accustomed to reading intelligence reports... they were given a number of sentences such as: *It is highly unlikely that...* All the sentences were the same except that the verbal expressions of probability changed. The officers were asked what percentage probability they would attribute to each statement if they read it in an intelligence report... While there was broad consensus about the meaning of *better than even*, there was a wide disparity in interpretation of other probability expressions.

Inspired by Kent's experiment, a Reddit user *u/zonation* polled fellow redditors with similar questions to assign probabilities between 0 and 100% for phrases like *chances are slight* or *almost certainly*. The resulting dataset is here: <https://github.com/zonation/perceptions/blob/master/probly.csv>

What to do

Create fully reproducible R code, which will download the dataset directly from provided GitHub repository and draw the boxplot visualizing the relationship between the term itself and subjectively attributes probabilities. The resulting figure should resemble the one below as closely as possible. The R code can just plot the figure on the screen, or save it into a file (e.g. as a JPG). Upload the R code into NTU COOL.



Hints

- Check the provided data to see what is the separator between individual values, choose the function relevant to this separator, and read data directly from online (check here for details: https://www.davidzeleny.net/wiki/doku.php/recol:data__import).
- Make sure that the left margin of the figure is wide enough to accommodate the labels - function `par` will help you with this, but you need to figure out which argument you need to set (call `?par` for help). Also, make sure that after drawing the boxplot, you return the `par` setting to the original values.
- The `boxplot` function usually draws the boxplots vertically, but you need to set them horizontally - check which of the function arguments can do that. Also, note that labels on the y-axis are written perpendicular to the axis, while labels on the x-axis are parallel to the axis.