

Sweave or how to make 286 customized reports in two clicks

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The R environment is normally used to perform statistical analyses and then people making statistics usually make a report. To make this report, we can either copy and paste the R output in a text editor or use Sweave.

Sweave is an R tool created by Friedrich Leisch which allows the insertion of the R code in LaTeX code in such a way that statistical analysis and statistical reports are compiled at the same time. The purpose of Sweave is to create dynamic reports which are automatically modified when data or analysis change (Leisch, 2002).

Sweave allows one to quickly update a report if data changed. It also can be used to make several reports with different data but all having the same structure (same sections, same text, same graphs, same tables...). With some automation and two clicks, it is possible to use Sweave to make a vast number of reports, each with a different data subset.

In clinical development, doctors participating in a study usually receive a report with the general results of the study. Sweave can be used to make this report. But one can go beyond this. Sweave allows the customisation of a report for each doctor using the data collected in his site and to compare the resulting customized statistical analyses with the overall study results.

References

Friedrich Leisch. Sweave: Dynamic generation of statistical reports using literate data analysis. In Wolfgang Härdle and Bernd Rönz, editors, *Compstat 2002 - Proceedings in Computational Statistics*, pages 575-580. Physica Verlag, Heidelberg, 2002. ISBN 3-7908-1517-9.