

R to LaTeX / HTML

Christophe Genolini^{1,2,3,*}, Bernard Desgraupes³, Lionel Riou Franca^{1,2,4}

1. Inserm, U669, Paris, France
 2. Univ. Paris-Sud and Univ. Paris Descartes, UMR-S0669, Paris, France
 3. Modal'X, Univ. Paris Ouest Nanterre La Défense, France
 4. Phisquare: Phisquare Institute, 75001 Paris
- *Contact author: genolini@u-paris10.fr

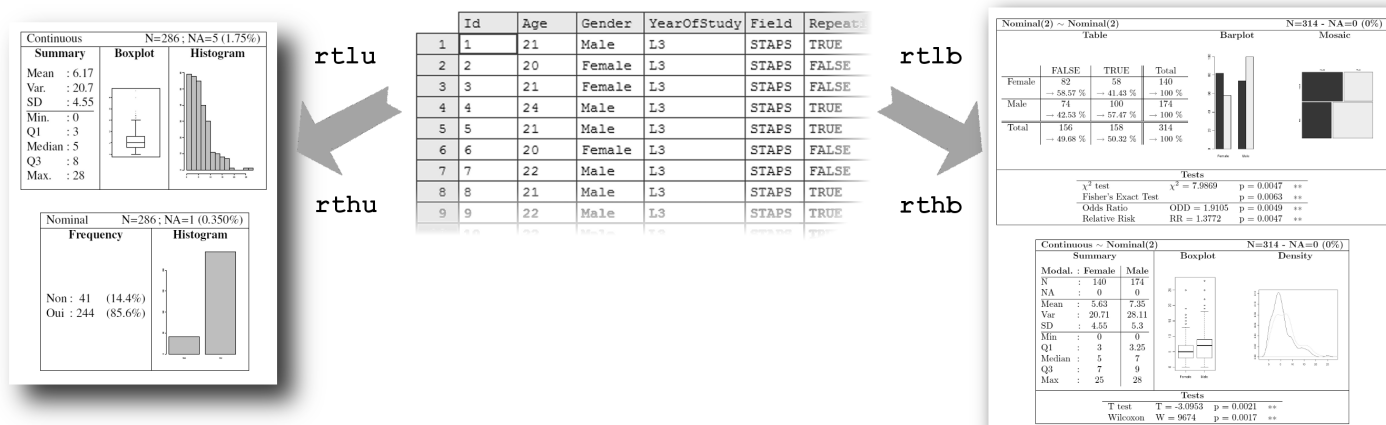
Keywords: Interface to other languages, Univariate analysis, Bivariate analysis, LaTeX, HTML

The package **r2lh** (R to LaTeX or HTML) provides facilities to export some R analysis (univariate and bivariate) in a LaTeX or HTML format. The main goal of this package is to facilitate the preliminary exploration of data by running automatically some classical analysis.

Univariate analysis (functions **rtlu** and **rthu**) describes a single variable X . According to X nature (**nominal**, **ordinal**, **discrete** -numeric with few modalities- or **continuous** -numeric with many modalities-), it computes frequencies, mean, standard deviation, quartiles, boxplot, barplot and histogram. The univariate analysis has been presented in [1].

Bivariate analysis (function **rtlb** and **rthb**) considers two joint variables $Y \sim X$. A first part is descriptive: frequencies, mean, standard deviation, quartiles of Y relatively to each modalities of X when applicable, juxtaposed boxplot, barplot, densities. A second part is more about testing the existence of a link between Y and X . It computes both parametric and non-parametric tests, trying many possible test. It also display some graphics helping the user to decide which test is more relevant (qqplot, densities..)

To illustrate its way of working, **r2lh** uses a data set resulting from enquiries led by some second year students of the University of Paris Ouest that had decided to investigate the “Exam Cheating in French Universities” [2].



References

- 1 Christophe Genolini, Lionel Riou Franca (2009) “R to LaTeX, Univariate Analysis” in *proceedings, User! 2009, The R User Conference 2009*, (Agrocampus-Ouest, Rennes, France), July 2008, pp 60.
- 2 Christophe Genolini (2007). “EPO2007: Exam cheating at French University” <http://christophe.genolini.free.fr/EPO/EP02007-Fraude.php>