

Easystats: A Collaborative, Open, Innovative and User-friendly Collection of Tools for
Data Science

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Abstract

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21 Word count: 9999

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There was a time when most of applied researchers - psychologists, sociologists or political scientists, progressed through their career by happily using the few statistical procedures at their disposal, such as correlations, *t*-tests or ANOVAs). But such time is over.

The explosion of computational power, accompanied by theoretical breakthroughs for instance in machine learning or probabilistic computing, has deeply transfigured the field of statistics. As a result, the amount of cutting-edge statistical algorithms has never been so large and most importantly, so available. Indeed, most of these complex techniques are at one copy-pasting away, being implemented in free and open-source software such as R (R Core Team, 2019) and Python.

On top of that accessibility explosion, the recent reproducibility crisis has recently shattered the quality standards and practices, pressuring researchers to adopt new tools and methodologies. Unfortunately, most of them lack training in statistics and computer science to fully take advantage of this new landscape. As a consequence, many scientists find themselves crushed between these two antagonistic forces of availability and demand. For the first time, a part of science is becoming limited by the expertise rather than the tools.

Understandably, this “methodological availability/demand” paradox can contribute to the negative feelings (reported for instance by students and young researchers) surrounding the methodological and statistical aspects of a scientific study. Moreover, this conflict can also become a threat to the academic publishing system, as finding expert (or just competent enough) reviewers for all the methods becomes a dilemma for editors (adding up to the already existing problem inherent to the current peer-review model). In turn, misused methods (and thus misinterpreted results) can pervade academic literature,

Thus, what could be done to ease and facilitate the transition or teaching of
researchers into the post open science revolution world? It is in this multidimensional
context that the *easystats* project attempts to make a small contribution to the answers.

53. Why esysstats and what does it bring to the table.

the pillars such as openness & colaborativeness, but also intuitiveness, easiness of use
etc.

- Lightweight (limit dependencies).
- Full function names (and clusterable)

63 description and aim of each package

64 **insight**

65 **bayestestR**

66 **performance**

67 **parameters**

68 **estimate**

69 **correlation**

70 Useful for network models, a new methodological field on the rise in psychological
71 science (Epkamp etc.).

72 **report**

73 **see**

74 **Future Directions**

75 Take over the world.

References

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