

How active development affects reproducibility

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Article requirements

- Published in Rjournal
- At least 4 years old
- Introduces package implementing method or plot.
- Github repo
- New version on CRAN in the last year
- Article provides code to create plots and tables

What we check

- The latest version on CRAN
- Last CRAN version before receiving date ?
- First CRAN version after receiving date ?
- Last CRAN version before online date ?
- First CRAN version after receiving date ?

Measures

Reproducibility type

1. Everything works. Differences in output formatting are acceptable.
2. Small changes in functions or variables names (ex. `x$ROC` -> `x$roc`).
Dependencies error in less than half of chunks.
3. An article is not reproducible - there are different results or problems with package's functions (changed arguments, errors).

Metrics

- Number of names' changes
- Number of API changes - missing functions or different arguments
- Number of wrong outputs

Auxiliary variables

- Github issues - open / closed
- Github stars
- Commits frequency
- Difference in major version value
- Lines added / removed
- Contributors
- Using CI