Publishing and Promoting your R Package

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May 16, 2018

Not yet written a package?

Take a look at these resources!

- Earo Wang's R-Ladies talk "Everything you need to know to create your own R package" https://github.com/earowang/rladies-pkg
- Maëlle Salmon's satRdays workshop https://github.com/maelle/satrday_package_workshop
- Forwards Package Development Workshop https://github.com/forwards/workshops/tree/master/eRum2018

Why publish on CRAN?

- Sign of quality

    - Code is ready to be used (not a beta version)
    - Basic standards: documented code, running examples, etc
    - Works with current version of R and other packages
    - Commitment of maintainer

- Discoverability

- Ease of installation

- Bioconductor, rOpenSci: even higher standards, code review

Preparing for CRAN release

- Hadley Wickham's R Packages give good advice: http://r-pkgs.had.co.nz/release.html

- Useful functions for additional checks:

    - `goodpractice::gp`
    - `spelling::spell_check_package`

- Use **rhub** to test on different platforms, particularly R-devel

    - Test *built* package with option `--as-cran`

```
pkg <- "BradleyTerry2_1.0-8.tar.gz"
check_with_rdevel(path = pkg, check_args = "--as-cran")
```

Promoting your package

- Some promotion will/may be done for you: CRANberries, R Views Package Picks, search engines (vignette/pkgdown site)

- Some channels are obvious: website, blog, Twitter (#rstats)

- Consider RPubs or gist for one-off tutorial/case study, e.g.

    - https://gist.github.com/sckott/08de710da349e48ede3e
    - https://rpubs.com/mdbrown/TreatmentSelection

- Publicize your new package via R Weekly https://rweekly.org/

    - Add to the weekly news blog, see CONTRIBUTING, and example pull requests new package, new version.
    - Submit an audio clip/script for the podcast via the form

- Would your package fit in a CRAN Task View? https://cran.r-project.org/web/views/

    - Check description for how to propose addition

Talks

- Meetups: RUGs, R-Ladies, satRdays

- Conferences (https://jumpingrivers.github.io/meetingsR/events.html)

  - **General**: useR!, rstudio::conf, EARL, eRum
  - **Specific**: R/Finance, R in Insurance, Bioconductor, Psychoco
  - **Non R-specific**: JSM, ESA, ...

- Conferences provide greater exposure, particular to people working in relevant field(s).

- Don't forget to share your slides! (Conference/personal website, LinkedIn, RPubs, Slideshare)

Paper

- A paper not only promotes your package but benefits from peer review

  - Paper can also overlap with vignette

- Traditional journals:

  - **Open Source Software**: The R Journal, Journal of Statistical Software
  - **Computing**: Computational Statistics and Data Analysis, Journal of Computational and Graphical Statistics, SoftwareX
  - **Science**: Bioinformatics, PLOS ONE, Method in Ecology and Evolution

- Alternative journals:

  - F1000research Bioconductor/R package gateway: publish, then open review
  - Journal Open Source Software: open code review, short descriptive paper

Research compendium

- A *research compendium* can showcase your work in a reproducible workflow

    - Could demonstrate a protocol/pipeline vs research study.

- Advice on how to structure a research compendium is given by rOpenSci: https://github.com/ropensci/rrrpkg

- The research compendium can be published on Zenodo, Figshare or Dryad

    - DOI points to a particular version (e.g. matching results in a paper)
    - Example using R: https://zenodo.org/record/61312#.WfnvS3BpFWO

Interacting with users

- Add a `BugReports` url to your `DESCRIPTION`

  - Using GitHub issues means that people can see if bug already reported and what action has been taken

- Consider creating an RSS feed for relevant StackOverflow questions

  - DIY based on search terms: https://meta.stackexchange.com/a/238460
  - Based on package tag (requires >1,500 reputation to add tag)

- Bug reports/help requests

  - Can show where documentation/tests need improving
  - Help you find out who's using your package and what for
  - Can give ideas for new features
  - Can lead to collaborations

Interacting with developers

- Add a `CONTRIBUTING.md` to your GitHub repository

    - Do you have a style guide?
    - Reminders to run check/tests/add NEWS item to pull requests

- Use tags to highlight issues: the following are promoted by GitHub

    - `help wanted`
    - `good first issue`

- Add a code of conduct: make sure everyone knows ground rules for happy collaboration and a welcoming community

    - `devtools::use_code_of_conduct` adds Contributor Covenant
    - Be prepared to enforce!

Don't keep it to yourself!