Creating and Maintaining R Packages

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Resources

The excellent book *R Packages* by Hadley Wickham:
r-pkgs.had.co.nz

R Manual - Writing R Extensions:
cran.r-project.org/doc/manuals/r-release/R-exts.html

The `devtools` package

Steps to create an R package

1. Decide the scope of the package.
2. Collect and clean up all the relevant scripts.
3. Create a new project in R Studio (or use `package.skeleton()` if you don't like R Studio).
4. *Write documentation!*
5. DESCRIPTION and NAMESPACE files (or use `roxygen2`).
6. *Unit tests!*
7. Deploy the package via Github
8. *Maintain the package!*

Useful tools

- R Studio
- R CMD check
- The `devtools`, `roxygen2` and `testthat` packages
- git and Github
- Continuous Integration (C.I.)

How to publish your package

http://r-pkgs.had.co.nz/release.html

1. Github (private repo)
2. Github (public repo)
3. CRAN
4. Bioconductor

Which option should I choose?

CRAN requirements

https://cran.r-project.org/web/packages/policies.html

- ► R CMD check
- ► Maintainers has valid email address
- ► License!
- ► Works across multiple platforms (Windows, Unix, Mac)

Bioconductor additional requirements

https://bioconductor.org/developers/package-guidelines/

- R CMD BiocCheck
- Vignette
- Reuse existing Bioconductor infrastructure
- Pass human review