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