

*Preparing for a hackaton in March*

[https://twitter.com/mauro\\_lepore](https://twitter.com/mauro_lepore)

[ds-incubator issue](#)

# 2020-02-04: R packages: The whole game

# Materials

- Adapted from the book [R packages, Chapter 2: The whole game](#), by Hadley Wickham and Jenny Bryan.
- [Source code of the foofactors package, by Jenny Bryan on rstudio.cloud](#).
- [Slides](#) from the section [Whole game](#), from the workshop [Building tidy tools](#), by Charlotte Wickham and Hadley Wickham ([RStudio conference, 2020](#)).
- [rstudio.cloud project](#).



# Building Tidy Tools

Charlotte Wickham &  
Hadley Wickham



rstudio::conf  
SAN FRANCISCO // JANUARY 27 - 30, 2020

from  Studio

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# The whole game

**Materials:** <http://rstd.io/build-tt>

What follows is adapted from

**The Whole Game**

chapter in the revised version of R Packages.

<https://r-pkgs.org/whole-game.html>

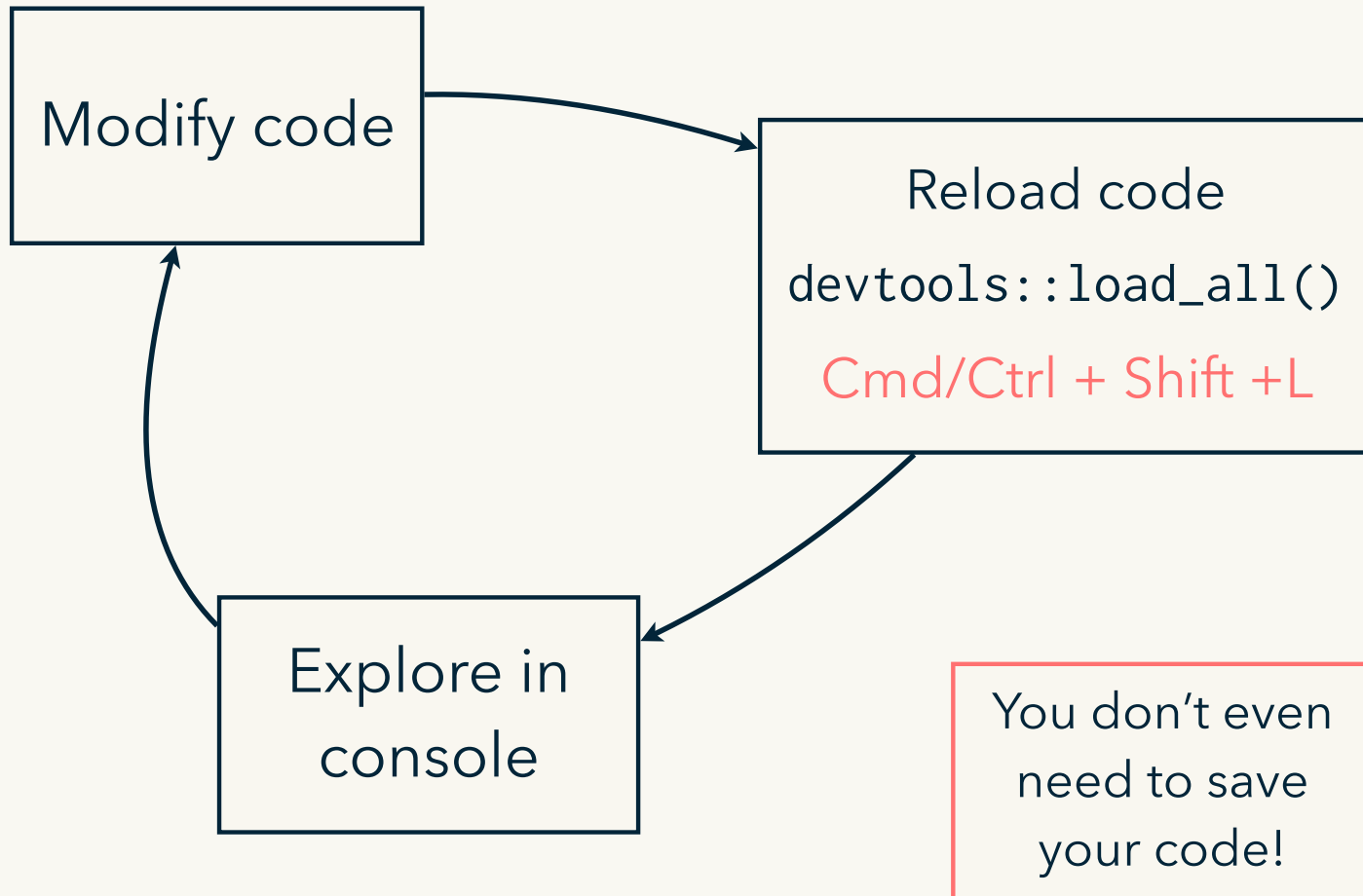
A proper package for the care and feeding of factors:

**forcats**

<https://forcats.tidyverse.org>

**A package is a set of  
conventions that  
(with the right tools)  
makes your life easier**

# Why do we love devtools? Workflow!





```
usethis::create_package()  
usethis::use_r()  
devtools::load_all()  
devtools::check()  
usethis::use_mit_license()  
devtools::document()  
devtools::install()
```

# R/RStudio setup

# Workflow setup: your .Rprofile

```
# Setup code that is run at R startup:  
# usethis::edit_r_profile()
```


```
# Helper to add devtools specifically:  
# usethis::use_devtools()
```

```
if (interactive()) {  
  suppressMessages(require(devtools))  
  suppressMessages(require(testthat))  
}
```

devtools makes  
usethis available too!

# Never include analysis packages here

```
if (interactive()) {  
  suppressMessages(require(ggplot2))  
  suppressMessages(require(dplyr))  
}
```



While you're in there, also add:

```
# usethis::use_partial_warnings()
```

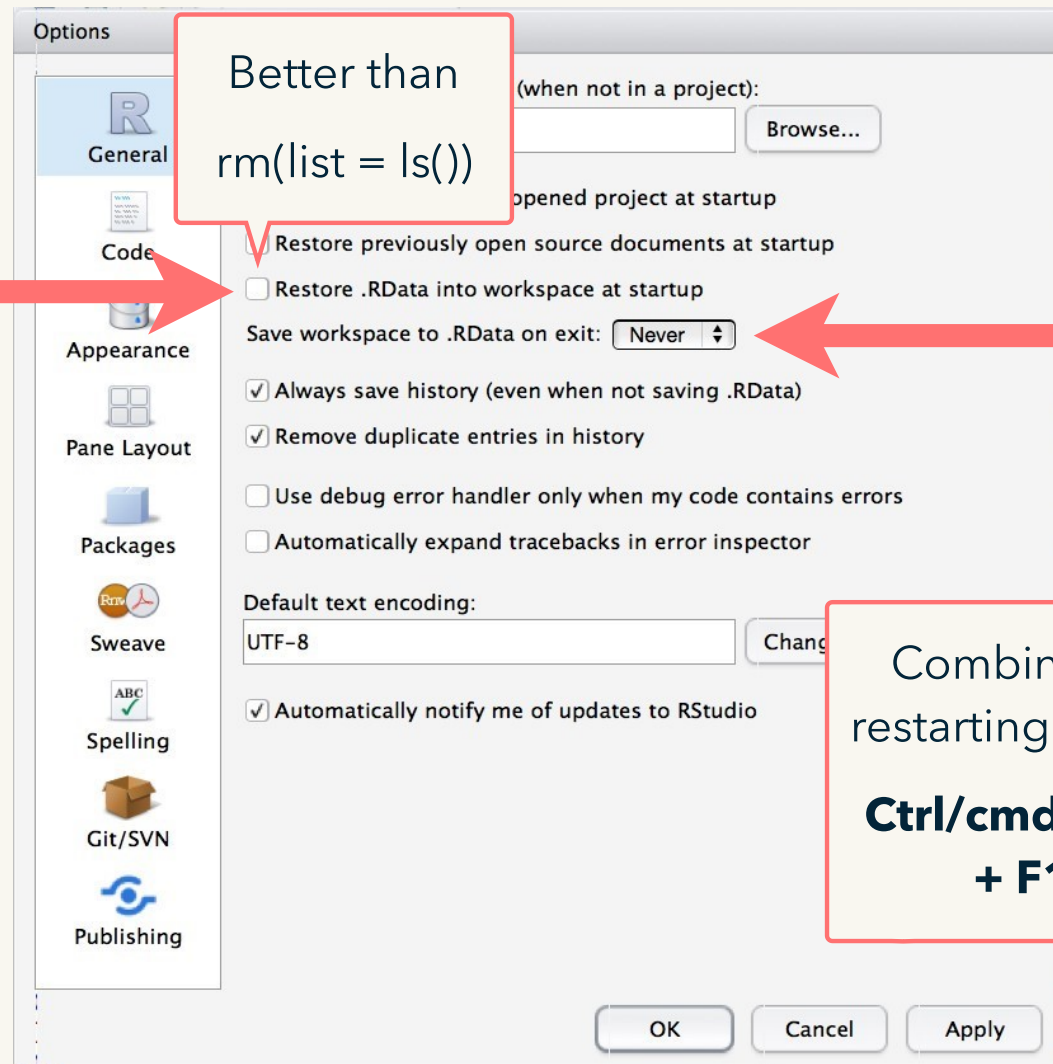
```
options(  
  warnPartialMatchArgs = TRUE,  
  warnPartialMatchDollar = TRUE,  
  warnPartialMatchAttr = TRUE  
)
```

# Tell usethis about yourself

```
options(  
  usethis.full_name = "Hadley Wickham",  
  usethis.description = list(  
    `Authors@R` = 'person(  
      "Hadley", "Wickham",  
      email = "hadley@rstudio.com",  
      role = c("aut", "cre"),  
      comment = c(ORCID = "YOUR-ORCID-ID")  
    ),  
  )  
)
```

The diagram illustrates the R code for setting up the 'usethis' package. It shows the 'options()' function with several arguments. Callouts point to specific parts of the code: 'Your first and last names' points to the first two arguments of the 'person()' function ('Hadley', 'Wickham'); 'Your email' points to the 'email' argument ('hadley@rstudio.com'); 'Leave as is' points to the 'role' argument ('c("aut", "cre")'); and 'Delete this line if you don't have an ORCID' points to the 'comment' argument ('c(ORCID = "YOUR-ORCID-ID")').

<https://usethis.r-lib.org/articles/articles/usethis-setup.html>



Better than  
`rm(list = ls())`

Combine with  
restarting R often!  
**Ctrl/cmd + shift  
+ F10**

# Your turn

Reproduce the code in [R packages, Chapter 2: The whole game](#).

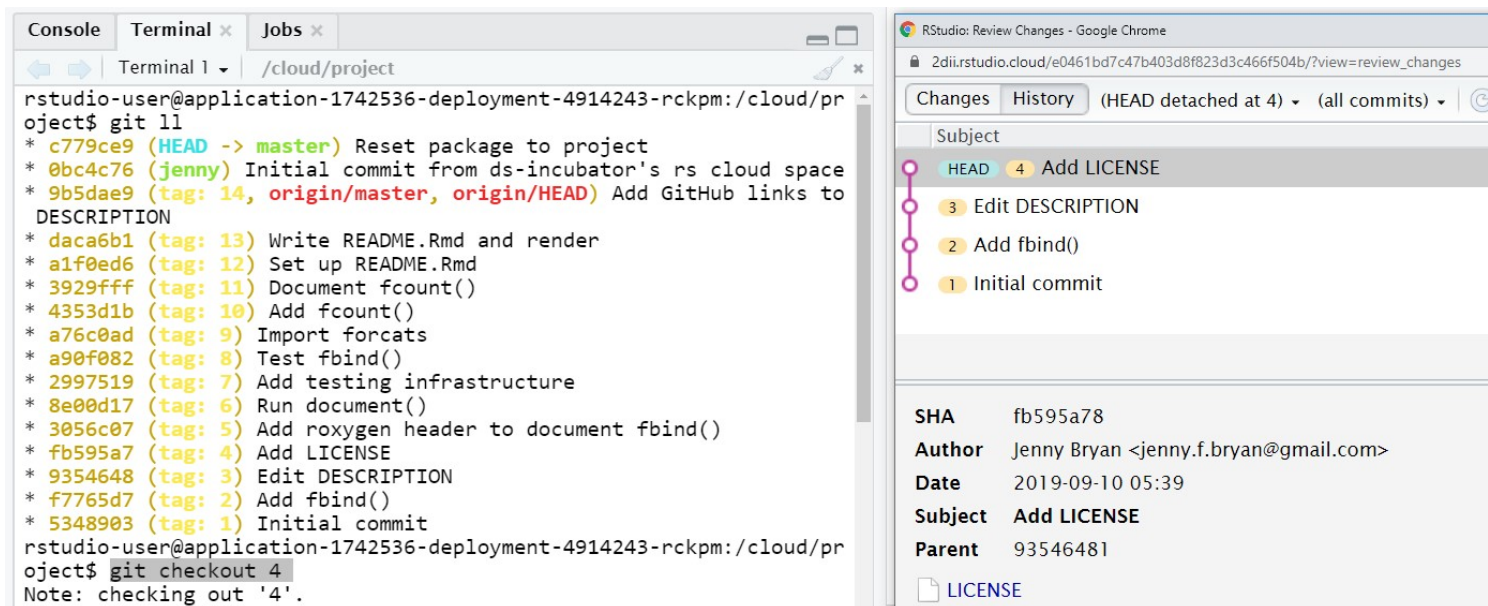
You may use the [foofactors project on rstudio.cloud](#). The branch `master` is an empty package. To see the end product, you may checkout the branch `jenny` with `git checkout jenny`.

...



# Your turn

You may also explore the history of Jenny's commits. Each commit is tagged with numbers 1-14. To see what the package looked like at, say, Jenny's 4th commit, run `git checkout 4`.



The screenshot shows the RStudio interface with two panels. The left panel is the Terminal, showing the output of `git log` and the command `git checkout 4`. The right panel is the 'Review Changes' window, showing a commit history graph and details for the selected commit (HEAD 4).

**Terminal Output:**

```
rstudio-user@application-1742536-deployment-4914243-rckpm:/cloud/pr
ject$ git log
* c779ce9 (HEAD -> master) Reset package to project
* 0bc4c76 (jenny) Initial commit from ds-incubator's rs cloud space
* 9b5dae9 (tag: 14, origin/master, origin/HEAD) Add GitHub links to
DESCRIPTION
* daca6b1 (tag: 13) Write README.Rmd and render
* a1f0ed6 (tag: 12) Set up README.Rmd
* 3929fff (tag: 11) Document fcount()
* 4353d1b (tag: 10) Add fcount()
* a76c0ad (tag: 9) Import forcats
* a90f082 (tag: 8) Test fbind()
* 2997519 (tag: 7) Add testing infrastructure
* 8e00d17 (tag: 6) Run document()
* 3056c07 (tag: 5) Add roxygen header to document fbind()
* fb595a7 (tag: 4) Add LICENSE
* 9354648 (tag: 3) Edit DESCRIPTION
* f7765d7 (tag: 2) Add fbind()
* 5348903 (tag: 1) Initial commit
rstudio-user@application-1742536-deployment-4914243-rckpm:/cloud/pr
ject$ git checkout 4
Note: checking out '4'.
```

**Review Changes - Google Chrome**

2dii.rstudio.cloud/e0461bd7c47b403d8f823d3c466f504b/?view=review\_changes

Changes History (HEAD detached at 4) (all commits)

Subject

- HEAD 4 Add LICENSE
- 3 Edit DESCRIPTION
- 2 Add fbind()
- 1 Initial commit

SHA fb595a78

Author Jenny Bryan <jenny.f.bryan@gmail.com>

Date 2019-09-10 05:39

Subject Add LICENSE

Parent 93546481

LICENSE

Return to master with `git checkout master`.