



# Building Tidy Tools

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

from R 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>

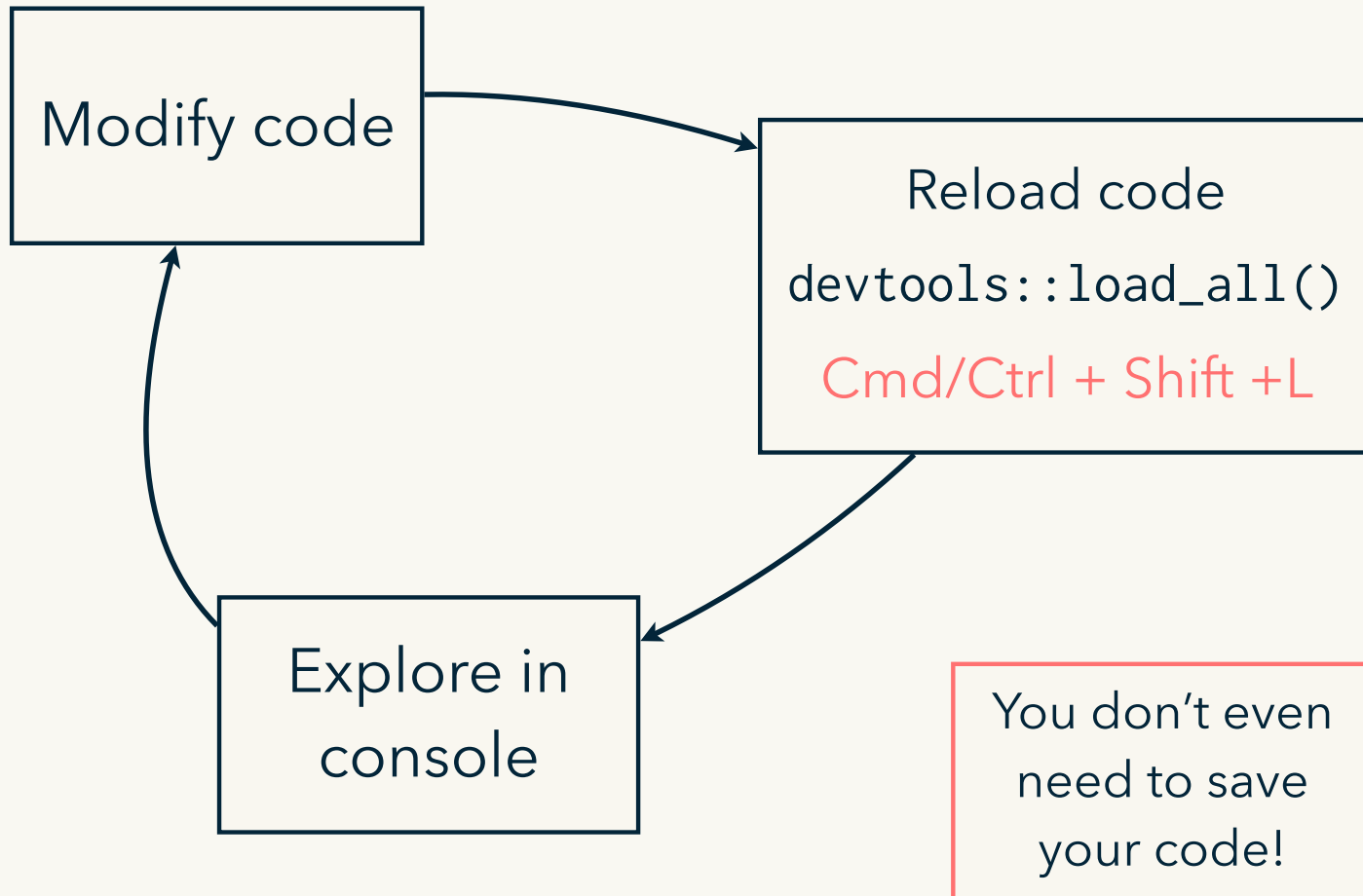
A proper package for the care and feeding of factors:

**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()
```

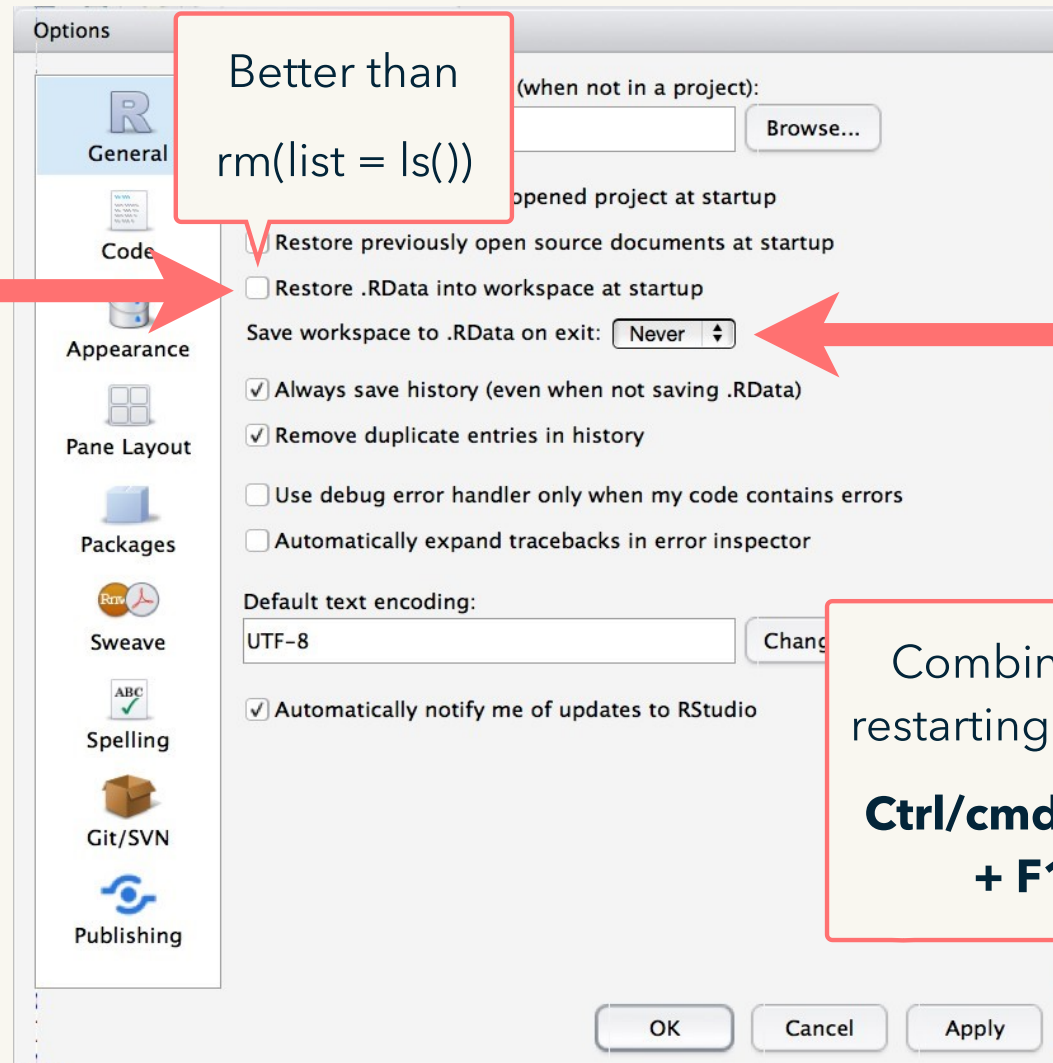
```
options(  
  warnPartialMatchArgs = TRUE,  
  warnPartialMatchDollar = TRUE,  
  warnPartialMatchAttr = TRUE  
)
```

# 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 a 'usethis.description' list containing a 'person()' object. Callouts point to specific fields: 'Your first and last names' points to the name strings, 'Your email' points to the email string, 'Leave as is' points to the role vector, and 'Delete this line if you don't have an ORCID' points to the ORCID field in the comment vector.

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



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

Combine with  
restarting R often!

**Ctrl/cmd + shift  
+ F10**

*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](#).

# Your turn

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

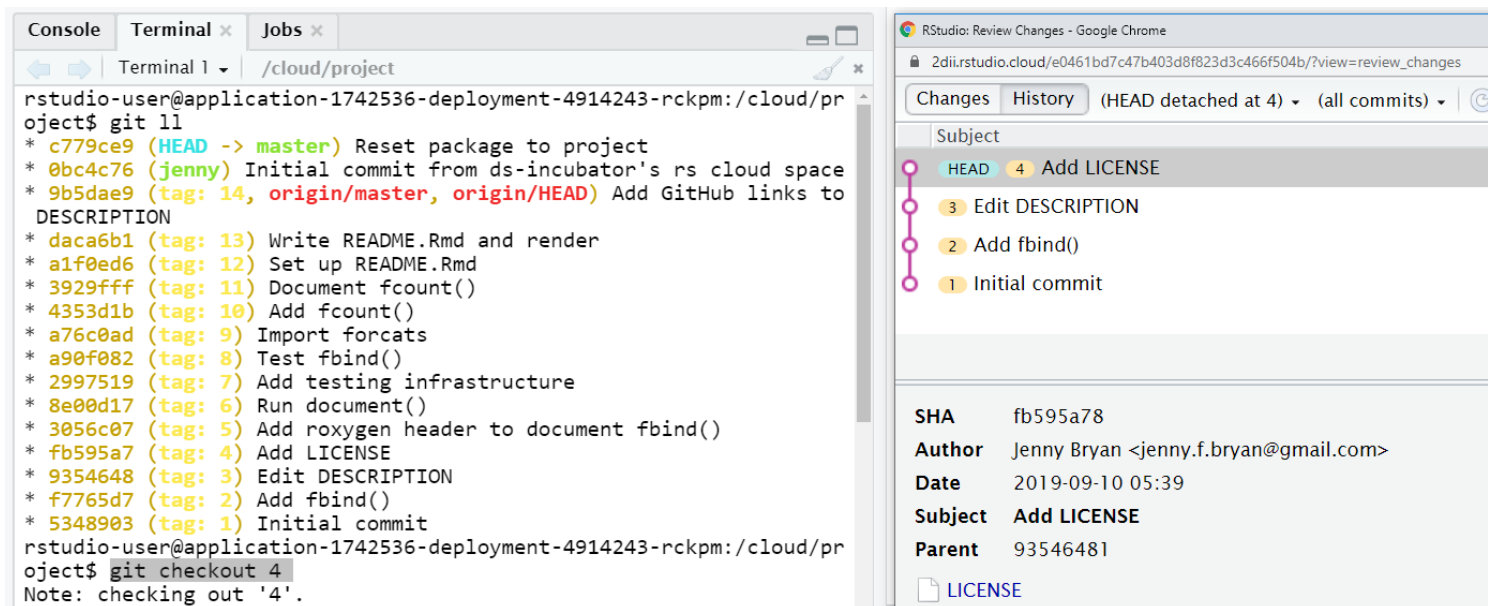
You may use the [foofactors project on rstudio.cloud](#). The branch `master` is an empty package. To see the end product, you may checkout the branch `jenny` with `git checkout jenny`.

...



# 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 image shows two side-by-side windows. The left window is a terminal with the following output:

```
rstudio-user@application-1742536-deployment-4914243-rckpm:/cloud/pr
ject$ git ll
* 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'.
```

The right window is a web browser showing the RStudio Review Changes page. The URL is `2dii.rstudio.cloud/e0461bd7c47b403d8f823d3c466f504b/?view=review_changes`. The page shows a commit history with the following details:

SHA	Author	Date	Subject	Parent
fb595a78	Jenny Bryan <jenny.f.bryan@gmail.com>	2019-09-10 05:39	Add LICENSE	93546481

The commit history also includes a list of changes: 1 Initial commit, 2 Add fbind(), 3 Edit DESCRIPTION, 4 Add LICENSE. The current commit is highlighted as HEAD 4.

Return to master with `git checkout master`.