Your First R Package in 30 Minutes

Jay Lee

Your First R Package in 90 Minutes?

Jay Lee

Reminders!

install.packages("devtools")

install.packages("roxygen2")

RStudio (latest preferred, but ok if not)

Screenshots:
https://joongsup.rbind.io/slides/r_pkg_devel.html

Agenda

About/Not About

Motivation

R Code Reuse

Workflow/Structure/Share

Let’s Create Your First R Package!

QnA

About

Bare Minimum

Data Analysis

RStudio on Mac

Your Workflow

Keyboard shortcuts

Not About

Full Scale

Data Engineering

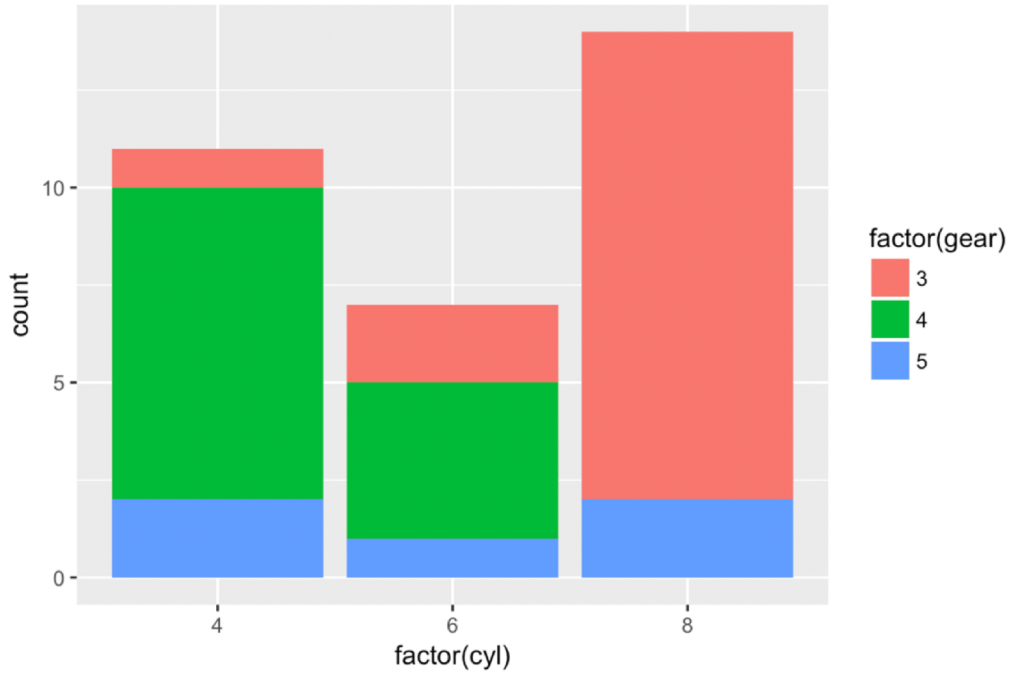
Syntax

Tests

Vignettes

Motivation

```
library(ggplot2)
ggplot(data = mtcars) +
    geom_bar(aes(x = factor(cyl), fill = factor(gear)))
```



Plots

2 lines of ggplot codes

to more complex

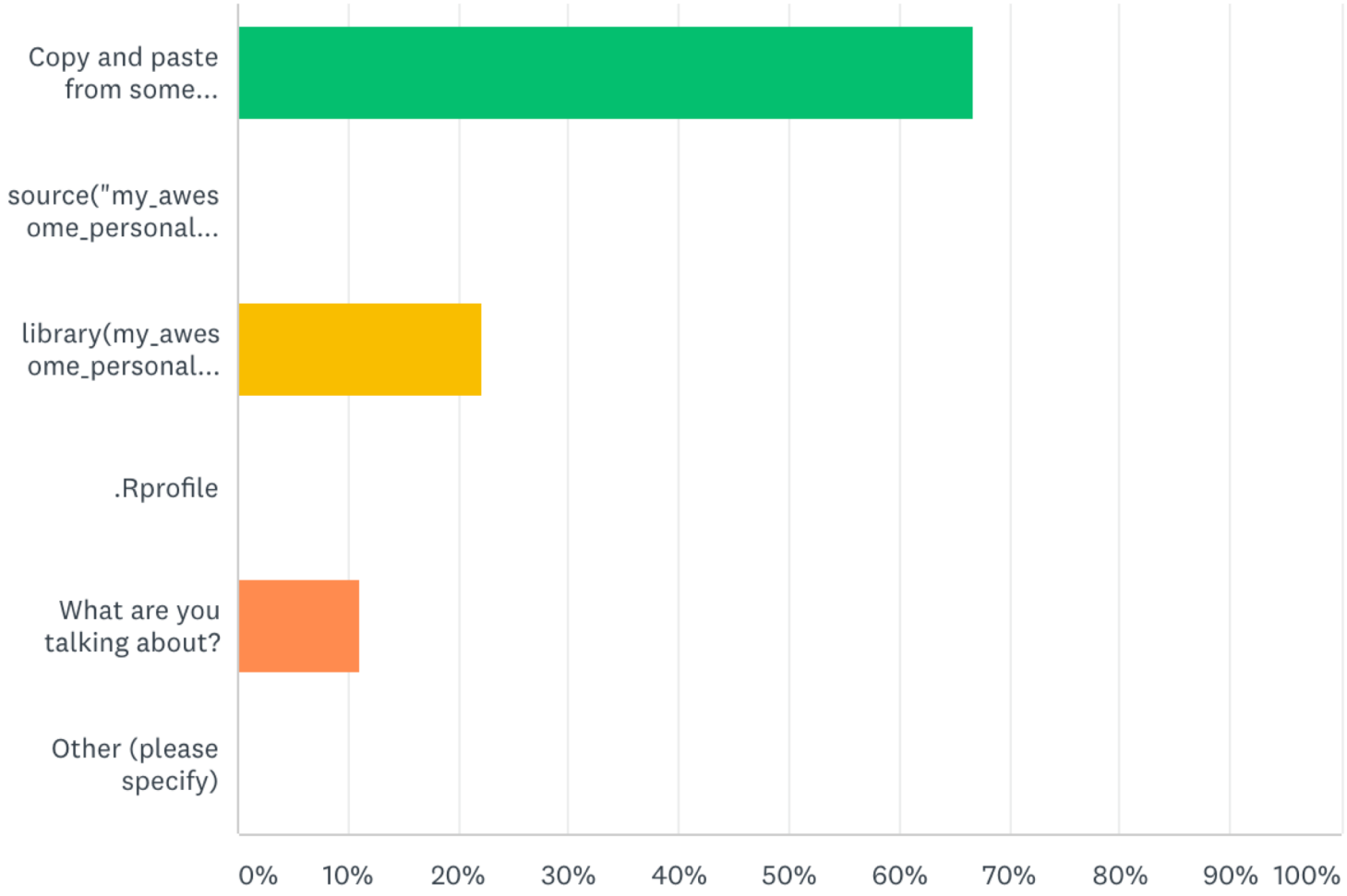
R code reuse

basic R pkg devel

to more complex

What is your main method of using frequently used (custom) R functions?

Answered: 9 Skipped: 0



Success Criteria

20

(talk audience) x 0.5

(% using copy/paste) x 0.6

(lucky half) x 0.5

= 3

A Cheat Sheet

Create an R package Project from RStudio

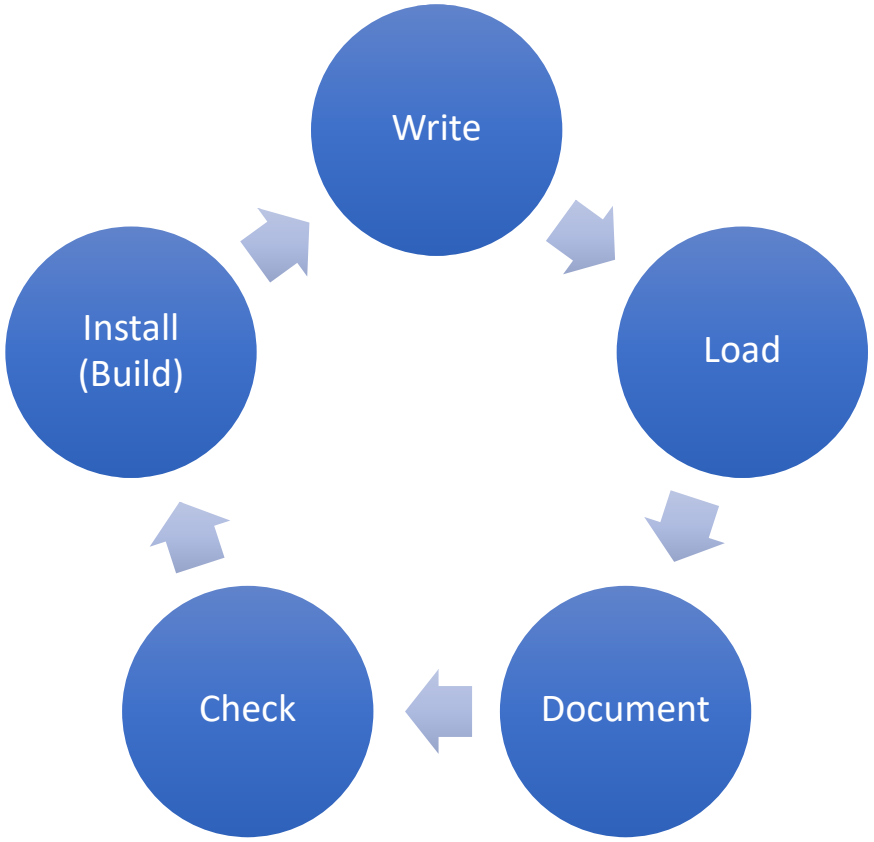
Change project options to use roxygen2

Delete R/hello.R, man/hello.Rd, and (default) NAMESPACE

Iterate through: write/load/document/check/install

Build source and share

Workflow



Write (cmd-shift-**N**)

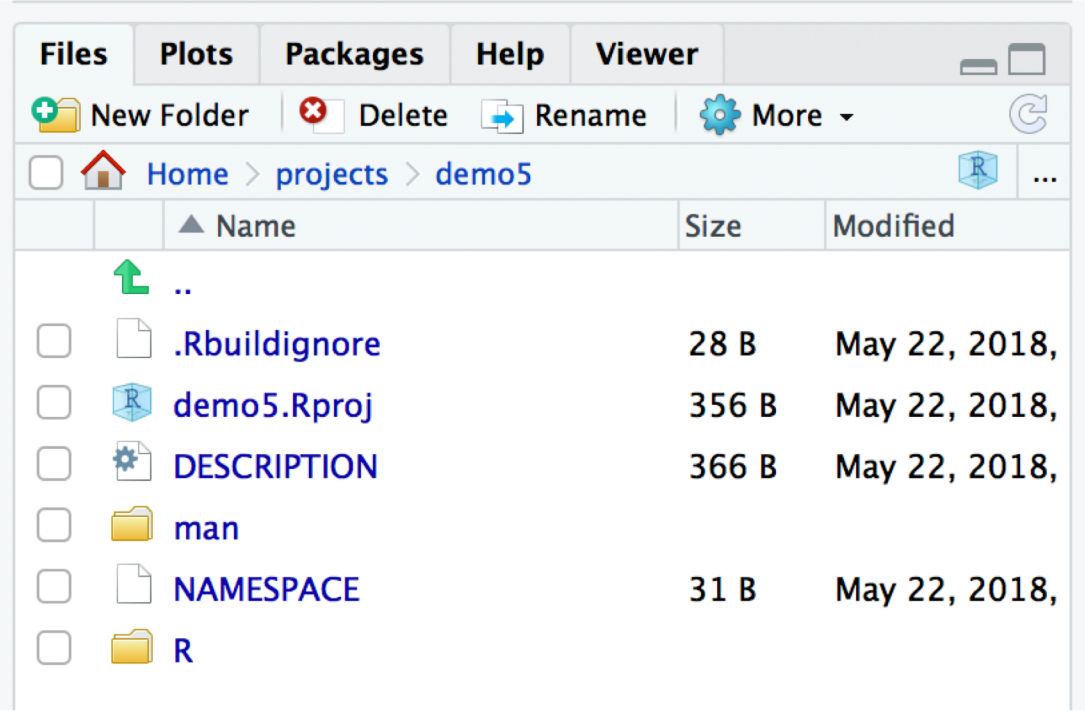
Load (cmd-shift-**L**)

Document (cmd-shift-**D**)

Ch**E**ck (cmd-shift-**E**)

Install (cmd-shift-**B**)

Structure



R/

man/

DESCRIPTION

Share

(cmd-shift-B) ➔ Personal

(Build Source/Local) ➔ Coworkers

Install.packages("local/path/to/src", repos = NULL)

(Build Source/Github) ➔ Strangers

remotes::install_github("author/repo")

Let’s Do It!

Reminders!

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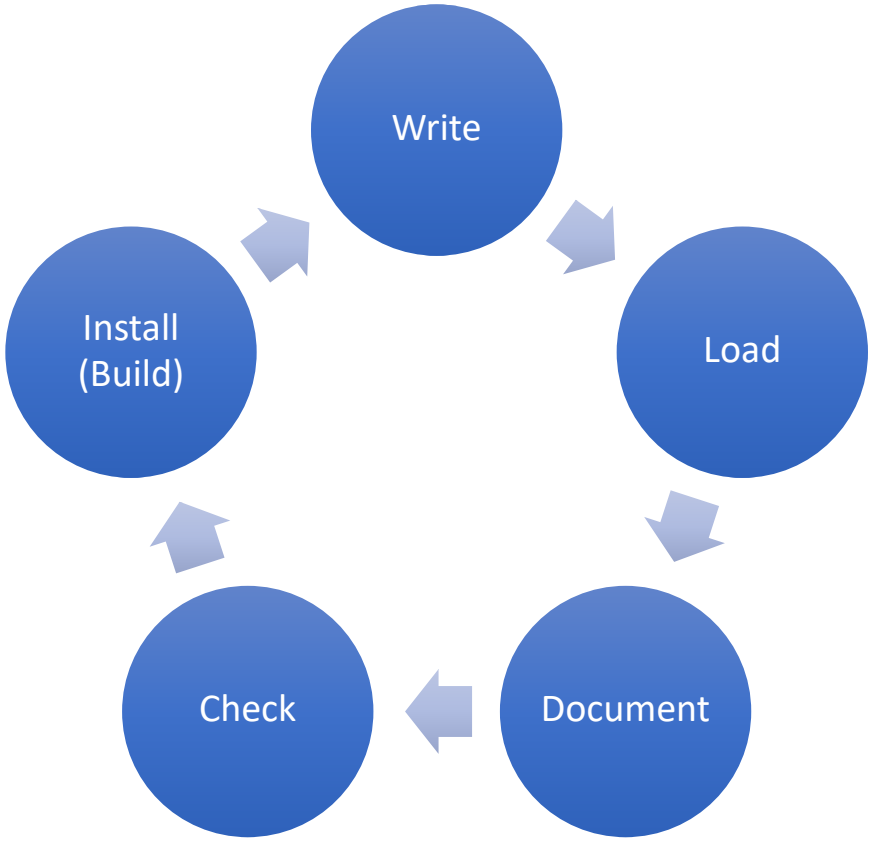

Write (cmd-shift-**N**)

Load (cmd-shift-**L**)

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Ch**E**ck (cmd-shift-**E**)

Install (cmd-shift-**B**)

What Next?

Identify commonly used operations

Write functions

Document them (if anything, for future you!)

Put them in a package

Extend the use of R package (e.g., tests, vignettes, blog, tweet, etc.)

For extra credit, consider submitting to CRAN! (only if applicable)

References

https://joongsup.rbind.io/slides/r_pkg_devel.html

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

http://r-pkgs.org/

https://github.com/forwards/workshops/tree/master/Chicago2019

https://whattheyforgot.org/index.html

https://www.rstudio.com/resources/videos/you-can-make-a-package-in-20-minutes/

http://tinyheero.github.io/jekyll/update/2015/07/26/making-your-first-R-package.html

https://hilaryparker.com/2014/04/29/writing-an-r-package-from-scratch/

http://rmflight.github.io/post/analyses-as-packages/