

rOpenSci Community Manager Joins Her Community

Learning R by Listening

Stefanie Butland

rOpenSci Community Manager

@stefaniebutland

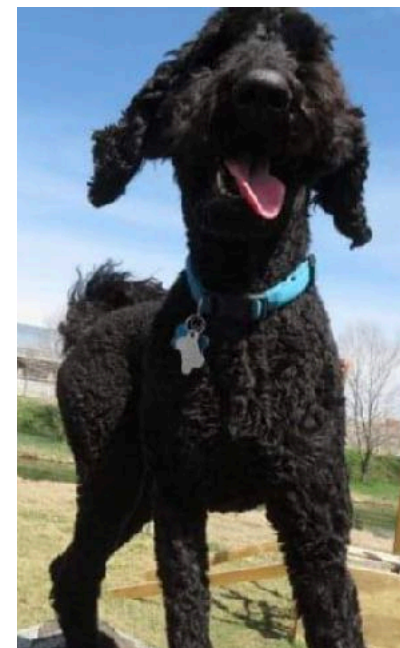
@rOpenSci

May 22, 2019 - R-Ladies Seattle



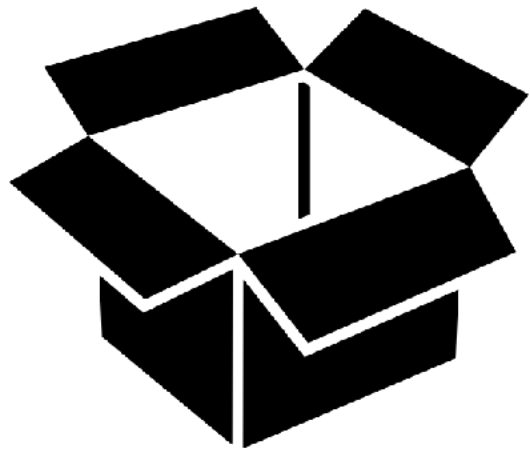
I contain multitudes

- Walt Whitman h/t Ed Yong



rOpenSci

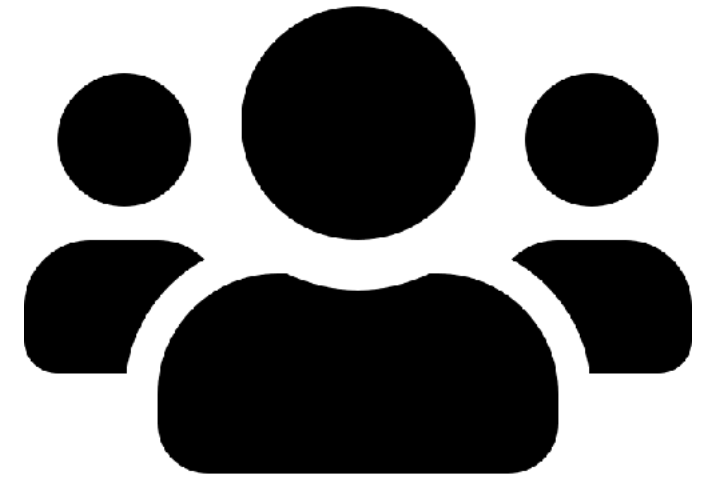
technical & social infrastructure



Software



Peer review



Community

rOpenSci by the numbers

5 staff

1 postdoc

2 Bioconductor pkgs

192 CRAN pkgs

287 total pkgs

~ 500 code contributors

> 500 citations

LOTS! of community members

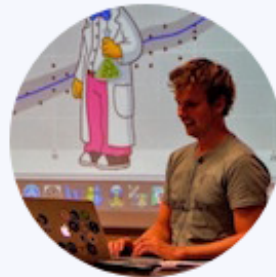
1 awesome open system for peer review of software



Karthik Ram



Scott Chamberlain



Jeroen Ooms



Stefanie Butland



Maëlle Salmon













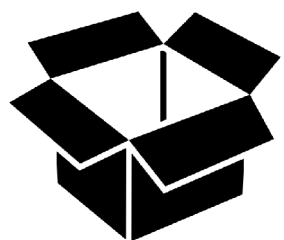
Dan Sholler

ropensci.org/packages/

FILTERS

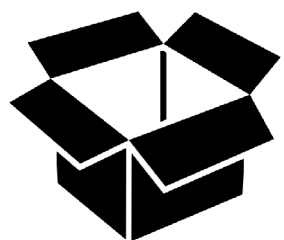
- All Altmetrics Data Publication Tools Visualization Databases Geospatial Web Images Processing Literature Computing Infrastructure Security Taxonomy CRAN / BIOC available Active repos

	NAME	MAINTAINER	DESCRIPTION		DETAILS
	monkeylearn	Maëlle Salmon	Accesses the Monkeylearn API for Text Classifiers and Extractors	CRAN	
	opencage	Maëlle Salmon	Interface to the OpenCage API	CRAN	
	riem	Maëlle Salmon	Accesses Weather Data from the Iowa Environment Mesonet	CRAN	
	ropenaq	Maëlle Salmon	Accesses Air Quality Data from the Open Data Platform OpenAQ	CRAN	
	rtimicropem	Maëlle Salmon	Supports the Analysis of RTI MicroPEM Output Files	CRAN	



4 of 6 new maintainers are women!

- [RSelenium](#): now maintained by Ju Kim
- [chromer](#): now maintained by Paula Andrea
- [qualtRics](#): now maintained by Julia Silge
- [rsnps](#): now maintained by Julia Gustavsen and Sina Rüeger
- [rdpla](#): now maintained by Alyssa Columbus
- [webchem](#): now maintained by Erik Sapper



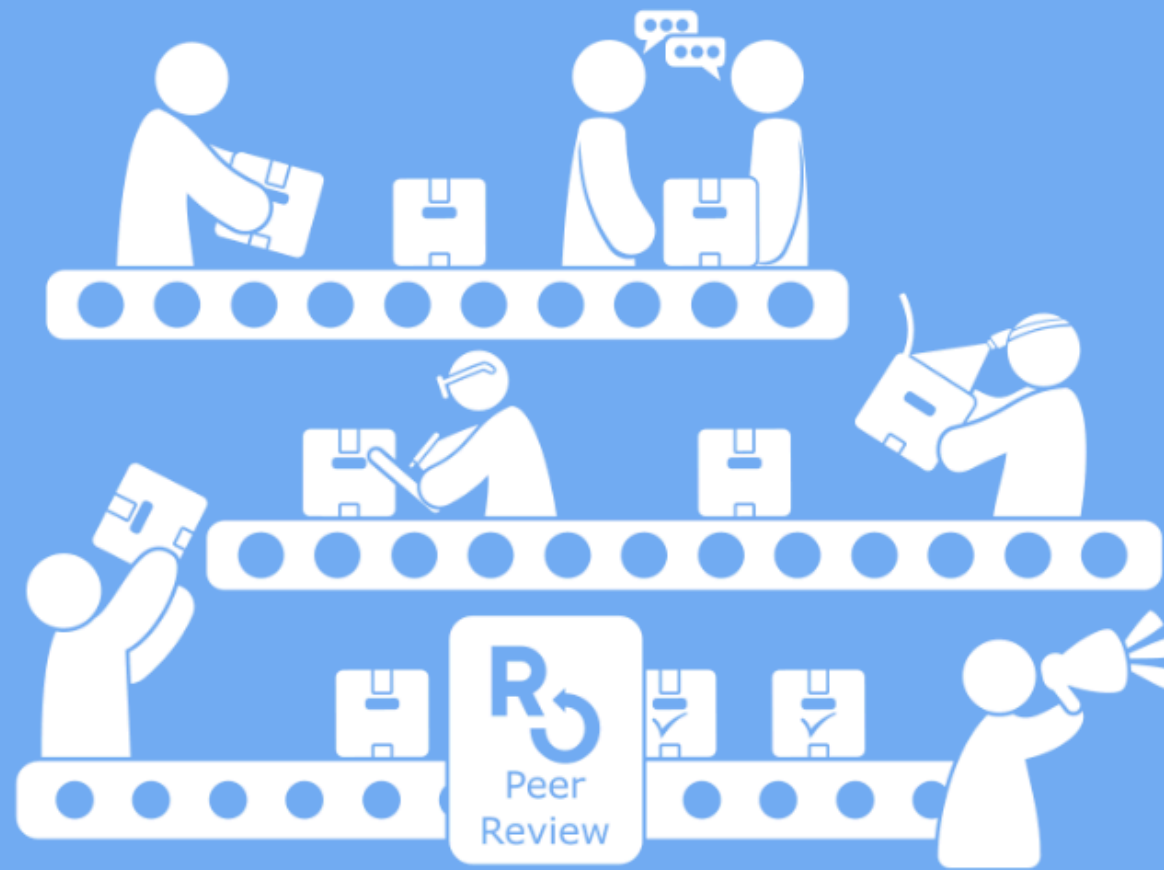


academic peer review of
research publications?

ropensci.github.io/dev_guide/

rOpenSci Packages

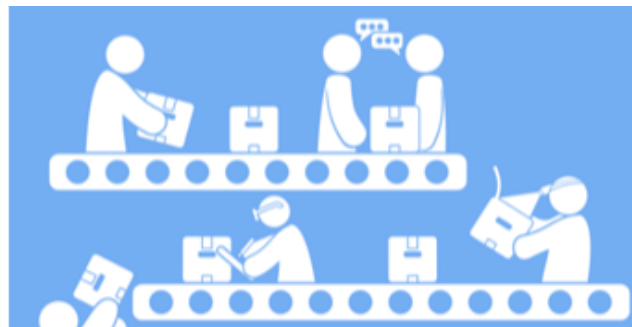
*Development, Maintenance,
and Peer Review*



Software peer review



July 2018



treeStartR

treeStartR is an R package for automated generation of starting trees for total-evidence phylogenetic analyses.

Phylogenetic trees, and particularly time-scaled phylogenetic trees, are increasingly estimated using parameter-rich models of evolution (Lartillot, Lepage, and Blanquart 2009; Wright, Lloyd, and Hillis 2016) and models incorporating macroevolutionary processes (Heath, Huelsenbeck, and Stadler 2014). Finding a starting tree with a computable likelihood to perform a Bayesian MCMC under these complex models can be a challenge, particularly when estimation involves many taxa, large datasets, and missing data.

Different phylogenetic estimation packages allow users to find starting trees in different ways, such as estimating a tree under parsimony (Stamatakis (2014)) or neighbor-joining (Bouckaert et al. 2014), randomly adding taxa to the tree (Bouckaert et al. 2014; Stamatakis 2014), or allowing the user to specify the tree. Addition of taxa is usually performed based on data - that is, using an algorithm (such as parsimony or neighbor-joining) to add the tips to the tree. However, in analyses of the fossil record, specimens may be included for which there are no molecular or morphological characters available, but the taxonomy of the

Links

Download from CRAN at <https://cloud.r-project.org/package=treestartR>

Report a bug at <https://github.com/ropensci/treeStartR/issues>

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Developers

April Wright
Author, maintainer



v 2018

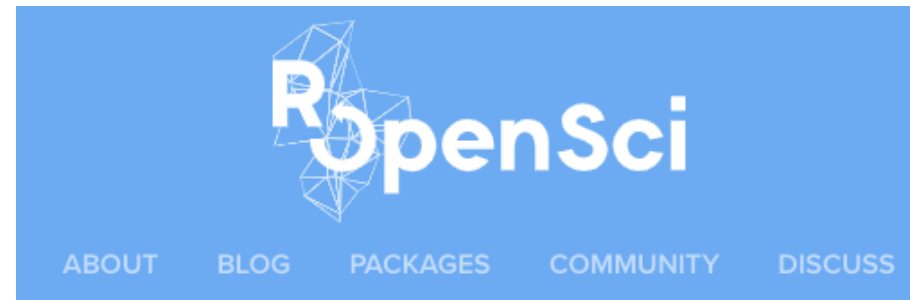
Software peer review



July 2018



v 2018



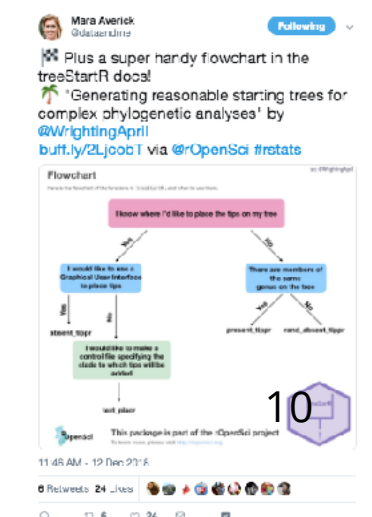
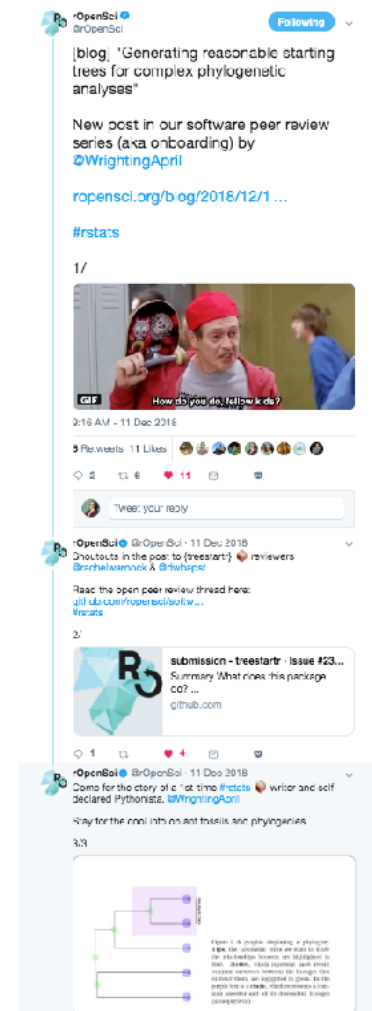
Generating reasonable starting trees for complex phylogenetic analyses

April Wright

December 11, 2018

I never really thought I would write an R package. I use R pretty casually. Then, this year, I was invited to participate during the last week of the [Analytical Paleobiology short course](#), an intensive month-long experience in quantitative paleontology. I was thrilled to be invited. But I got a slight sinking feeling in my stomach when I realized all the materials were in R.

And so I, a Pythonista, decided I would spend some of my maternity leave writing R packages to try to blend in with students who had spent the month living and breathing R.



Review for us: ropensci.org/onboarding

“As a user, you are qualified as a potential package reviewer if you have some appreciation for what makes your favourite packages useful”

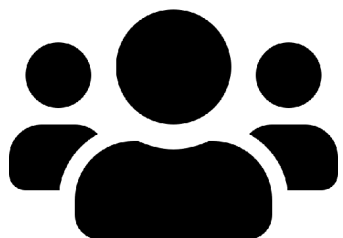
- Miles McBain



Experience in your midst!

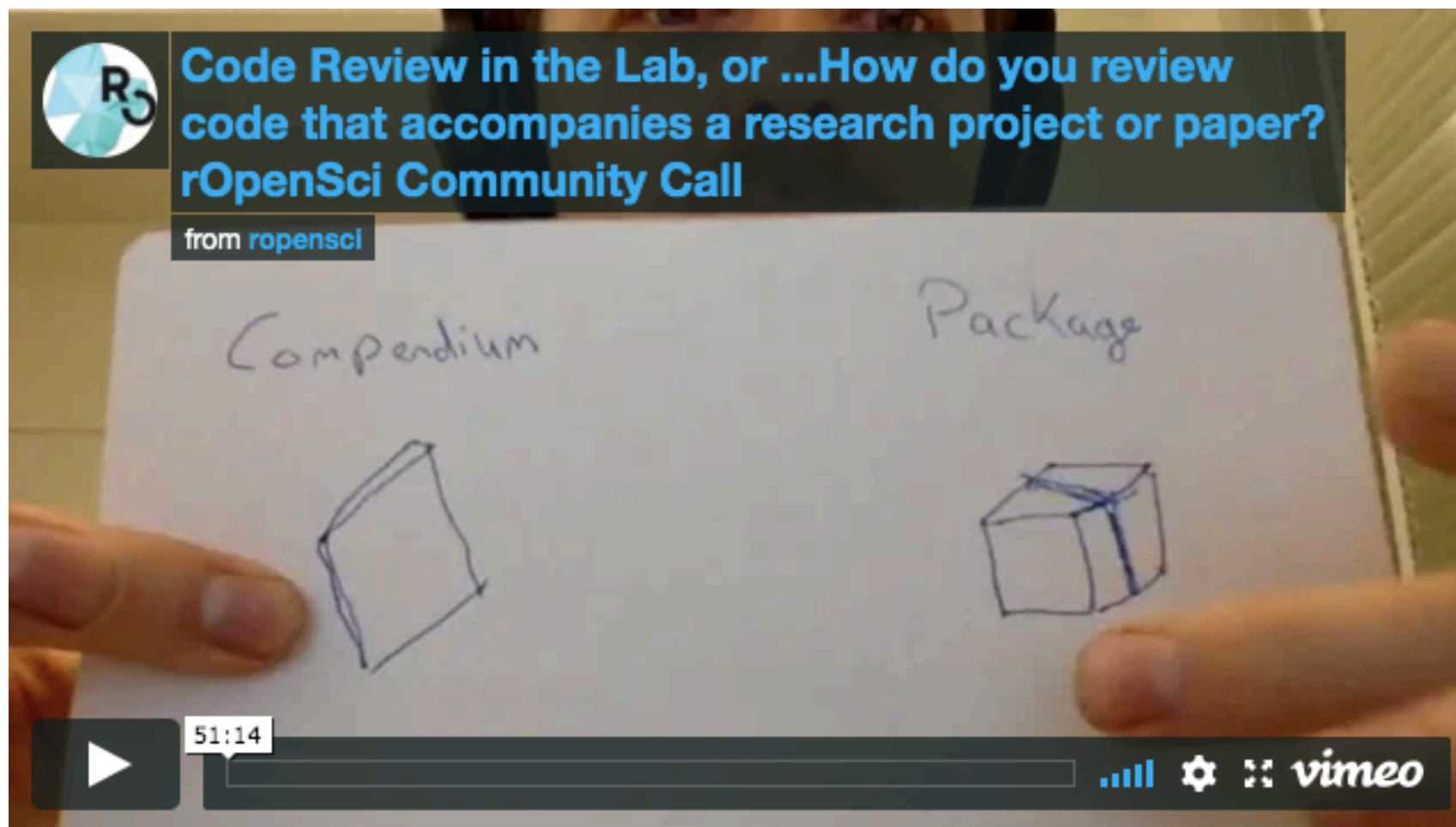


- attended an rOpenSci unconf
- contributed a blog post
- maintain an rOpenSci package
- reviewed
- used
- commented in a forum thread
- attended a Community Call
- read a blog post
- 💜'd or RT'd a tweet



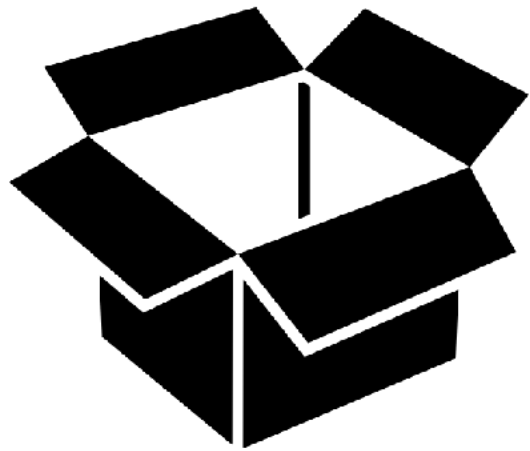
Code review in the lab?

Community Call video, discussion, summary

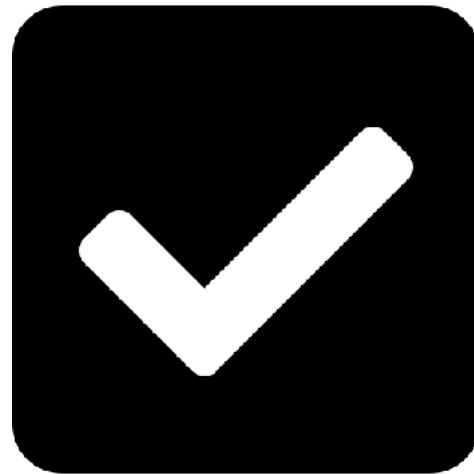


<https://ropensci.org/commcalls/2018-10-16/>

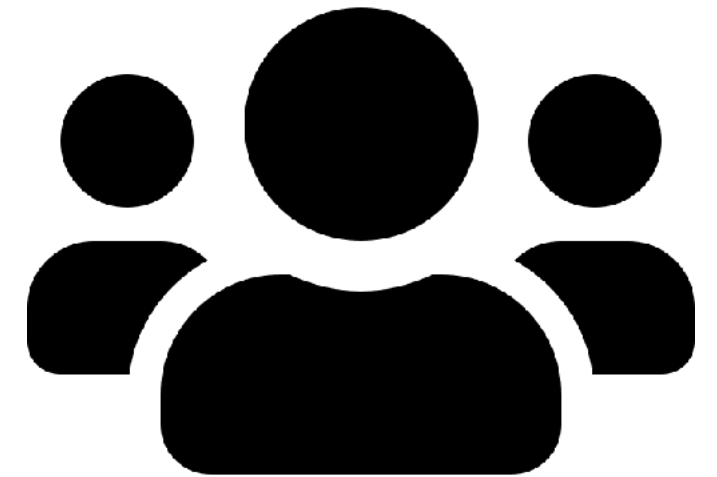
<https://ropensci.org/>



[/packages](#)



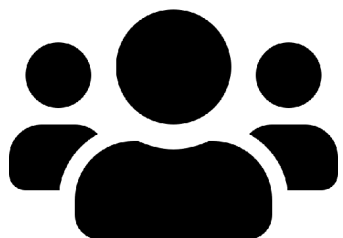
[/software-review](#)



[/community](#)

I taught myself some R

**This is about me ...
but really it's about you**



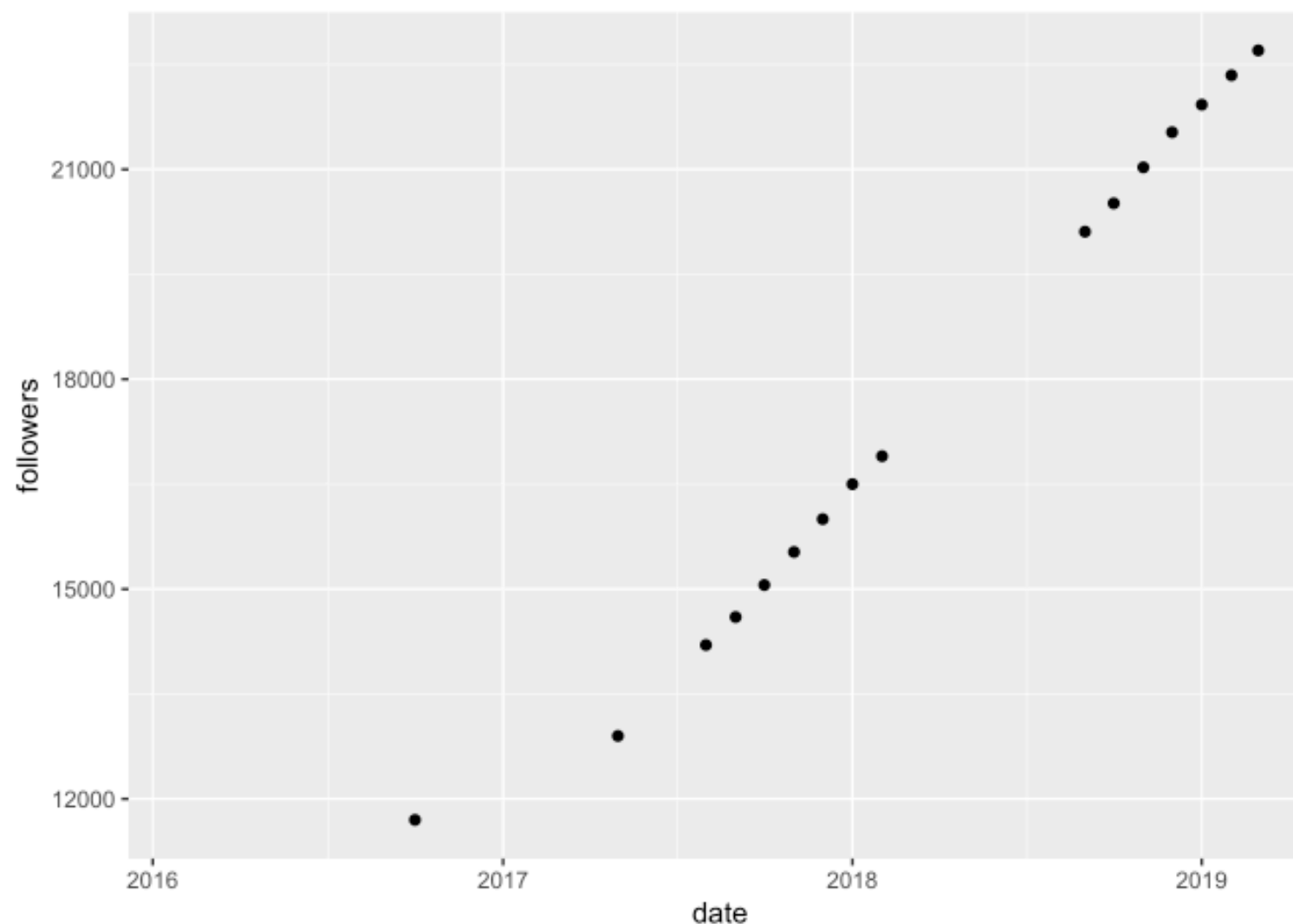


Between January 10th and March 7th, I made an **RMarkdown** report with the **plots** I wanted to make...

This is what I came for

```
# use ggplot2 to make point or line plots of date vs tweets, mentions, new followers etc  
# followers column is the only one that is not 100% objective, since it is not archived b  
y twitter analytics the way mentions etc are  
ggplot(data = metrics, aes(x=date, y=followers)) +  
  geom_point()
```

```
## Warning: Removed 22 rows containing missing values (geom_point).
```



Number of rOpenSci followers on Twitter has increased steadily since September 2016.

...from a csv file with some data I collected and whose **date column** is formatted correctly, where I understand the **provenance** of the data...

Read csv of Twitter data

```
# load data from csv -----  
# careful: read_csv is tidyverse; read.csv is not  
# metrics is an "object"  
  
# > here::here()  
# [1] "/Users/stefaniebutland/GitHub/stefaniebutland/twitter_time"  
  
# I learned the hard way that lubridate::here() masked here::here() so need  
package to avoid errors  
  
metrics <- read_csv(here::here("data", "2019-03-02_twitter_metrics_monthly_rOpenSci.csv"))
```

JAN 2019 SUMMARY

Tweets	Tweet impressions
48	23.3K
Profile visits	Mentions
549	64
New followers	
29	

Display table of Twitter data

```
knitr::kable(metrics, caption = "Twitter metrics table")
```

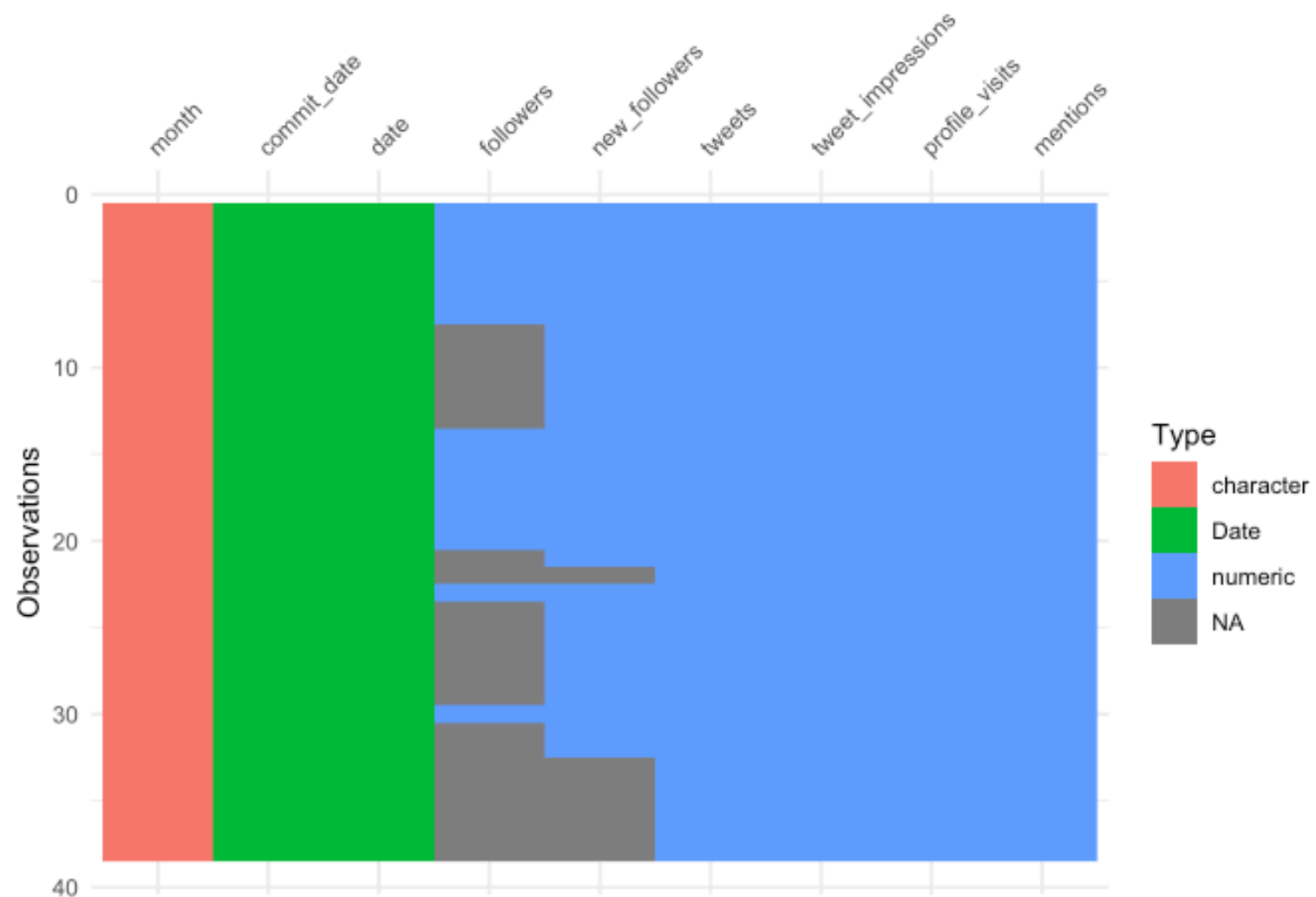
Twitter metrics table

commit_date	date	month	followers	new_followers	tweets	tweet_impressions	profile_visits	mentions
2019-03-01	2019-03-01	Feb	22701	351	20	205000	2327	348
2019-02-01	2019-02-01	Jan	22345	405	26	217000	3603	292
2019-01-02	2019-01-01	Dec	21925	333	28	211000	2369	212
2018-12-02	2018-12-01	Nov	21531	476	38	244000	4104	497

...I tasted the magic of **the visdat package** and knew where my **missing data** was...

Try `visdat` magic

```
# use visdat package to visualize missing data  
# this was the first package I tried after reading in csv, initially just for fun  
vis_dat(metrics)
```



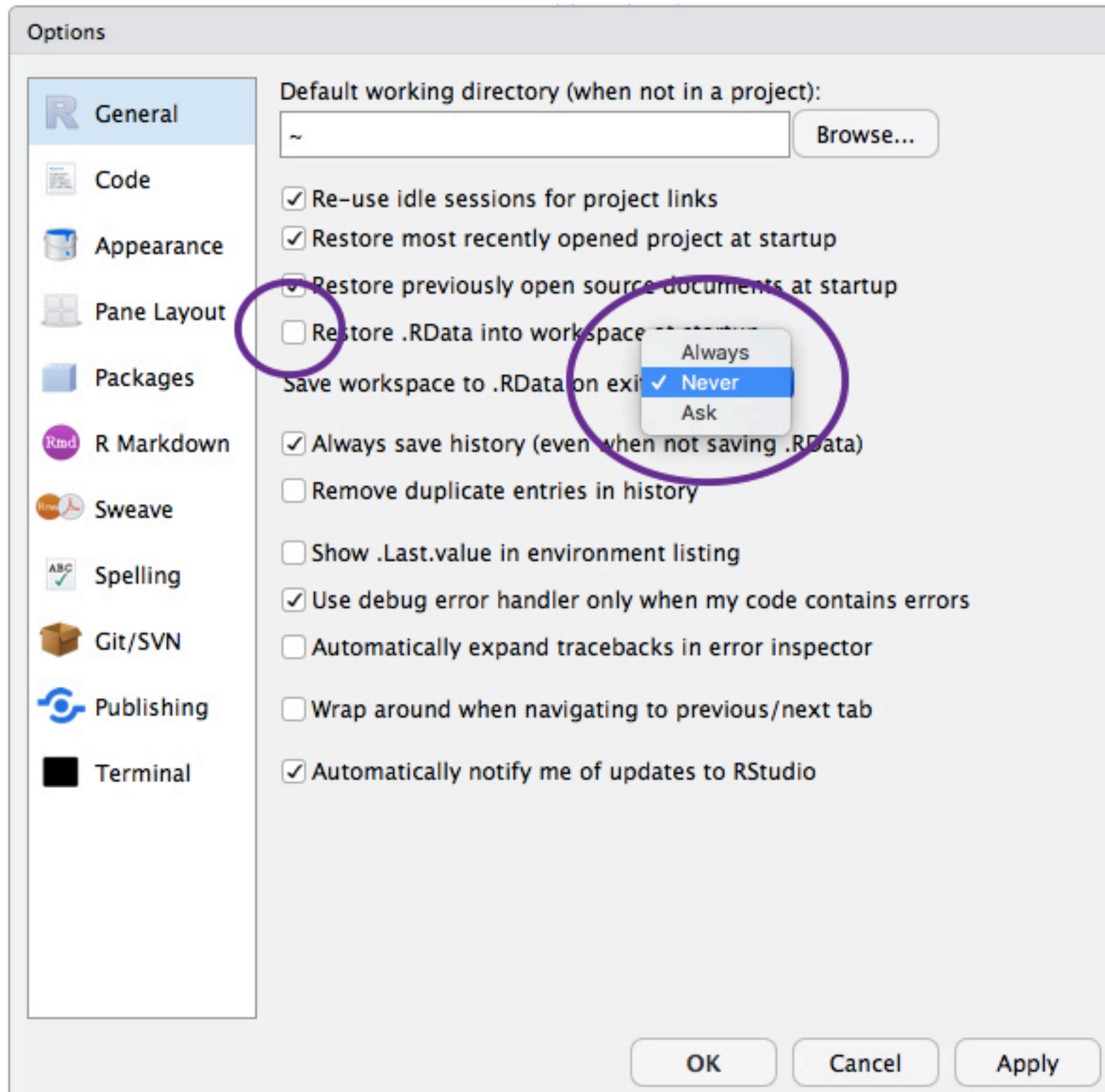
...and I'm working in **RStudio** connected to my own public **GitHub** repository with data and scripts in the right folders...

The screenshot shows the RStudio interface with the following components:

- Source Editor:** Contains R code for data analysis. The code includes comments and function calls for loading packages, reading CSV data, and using the `here` package for file management.
- Environment:** Shows the Global Environment with a data object named `metrics` containing 38 observations of 9 variables.
- Files:** A file explorer showing the project structure, including folders like `data`, `docs`, `plots`, `scripts`, and files like `.gitignore`, `.Rhistory`, `README.md`, and `twitter_time.Rproj`.

```
32 > ## Data Analysis
33 > ### Load Packages
34 > ```{r load pkgs, message=FALSE, collapse=TRUE}
35 > # load packages -----
36 > library(tidyverse)
37 > library(knitr)
38 > library(here)
39 > library(usethis)
40 > library(visdat)
41 > library(lubridate)
42
43 > usethis::use_github()
44 > ```
45
46 > ### Read csv of Twitter data
47 > ```{r read_csv, echo=TRUE, message=FALSE, results='hide'}
48 > # load data from csv -----
49 > # careful: read_csv is tidyverse; read.csv is not
50 > # metrics is an "object"
51
52 > # > here::here()
53 > # [1] "/Users/stefaniebutland/GitHub/stefaniebutland/twitter_time"
54
55 > # I learned the hard way that lubridate::here() masked here::here() so need
56 > # to call specific function within the package to avoid errors
57 > metrics <- read_csv(here::here("data",
58 > "2019-03-02_twitter_metrics_monthly_rOpenSci.csv"))
```


...never saving my RStudio workspace when I exit...



...using `here::here()` so I don't hardcode my local file paths so Jenny Bryan doesn't come set my laptop on fire. And once I used “masking the function” and “calling the function from the package” in a sentence!

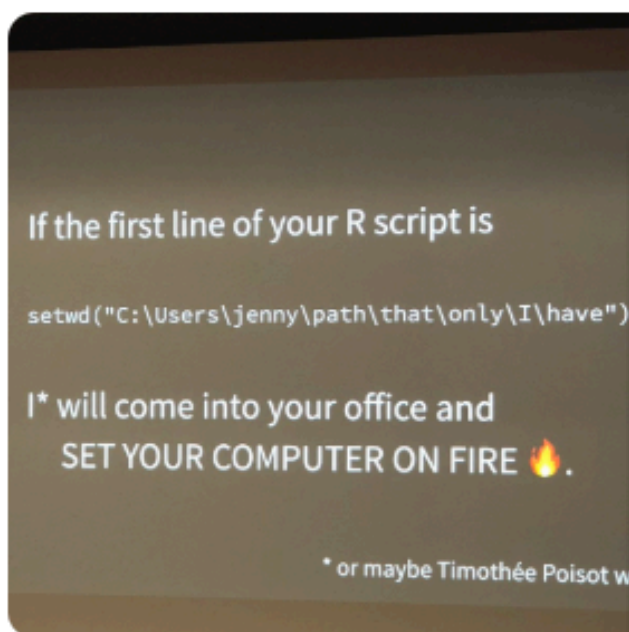


Hadley Wickham ✓

@hadleywickham

Following

The only two things that make @JennyBryan 🤔😡💩. Instead use projects + `here::here()` #rstats



4:50 PM - 10 Dec 2017

305 Retweets 992 Likes



Conflict between here in, uh, here, and here in lubridate?

tidyverse lubridate



mara Sustainer

1 2018-03-02

Personally, I almost always use `here::here()`, even when I *don't* have lubridate attached. But, as jenny mentioned, you've described the situation as it is.



3 to my (beginner) R success

- in-person and online trust networks (aka community)
- a specific modest project
- the “right” tutorials and resources for me



In-person and online trust networks

Omigosh but this
community is everything

- Me

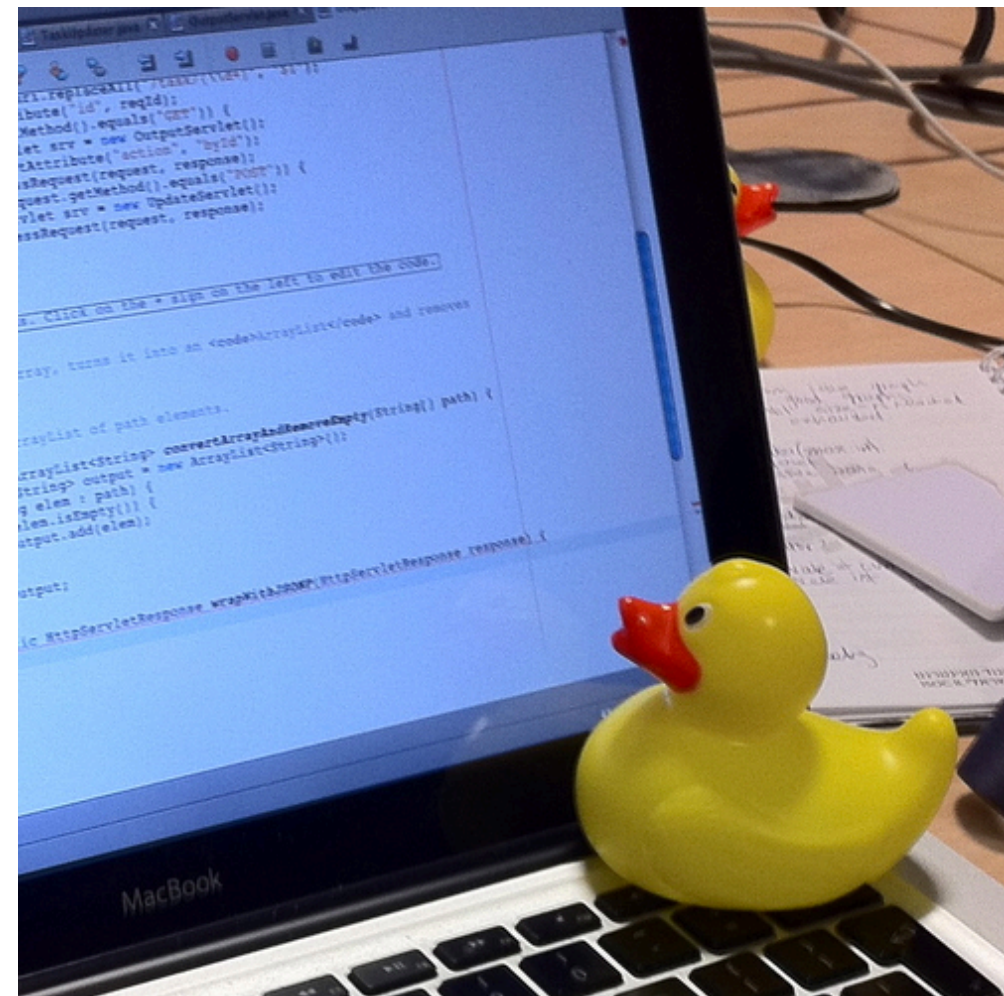


#rstats



Human rubber duck debuggers

“wait, my x-axis of dates sorted itself alphabetically?!”



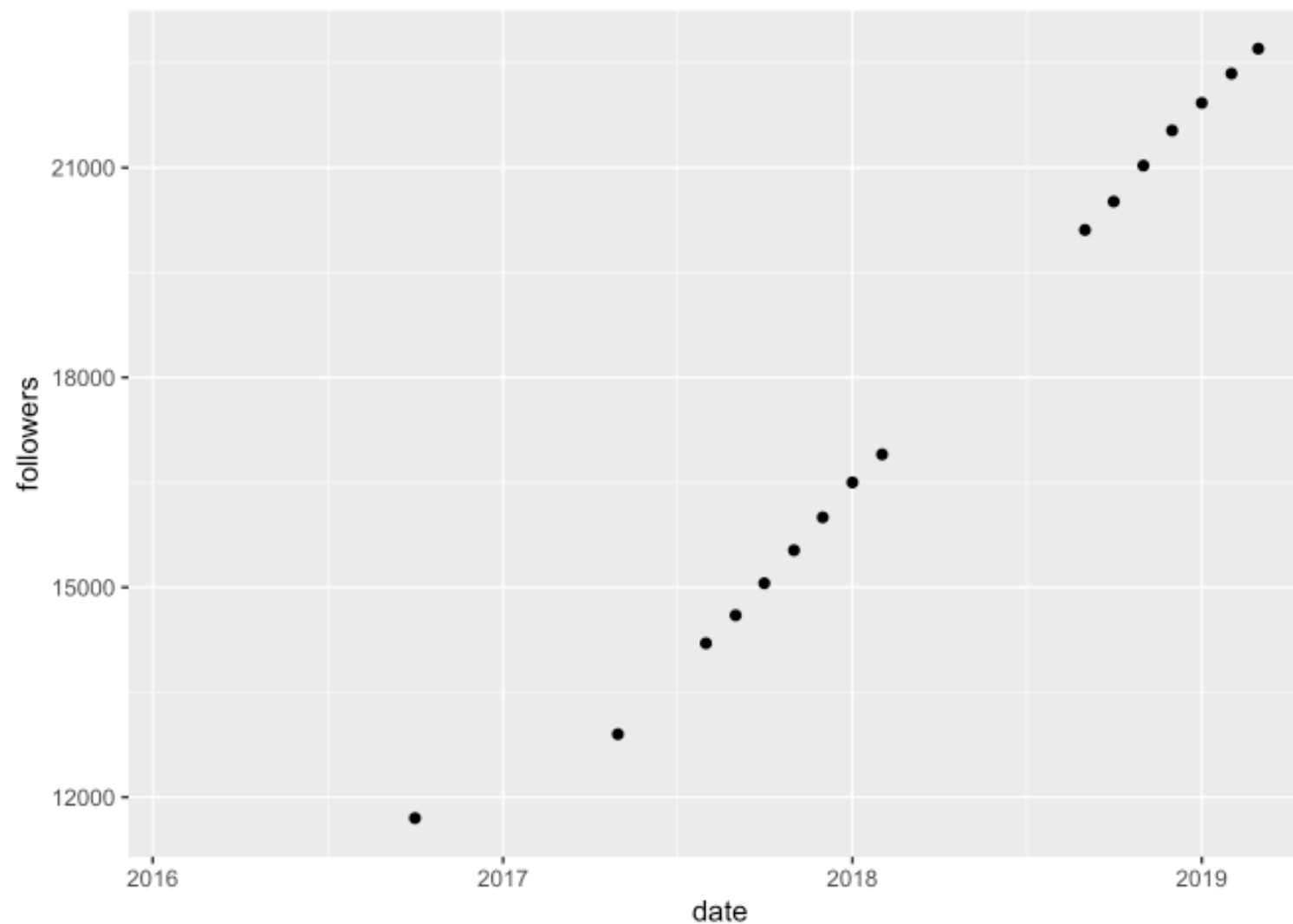


A specific modest project

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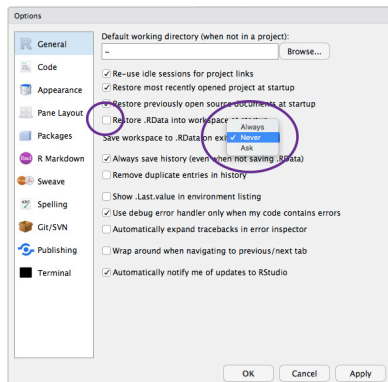
The “right” resources for me

designed by us, for us.
100 oriented towards R beginners
aims to provide a solid foundation of R skills

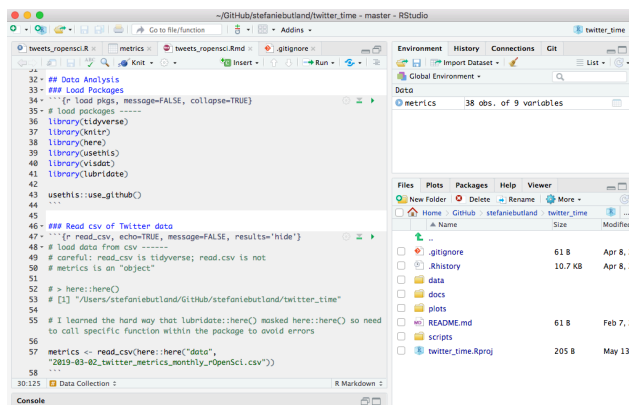


Jen Richman, Lisa Williams, Danielle Navarro
<https://rladiessydney.org/ryouwithme>

Where did you learn that?

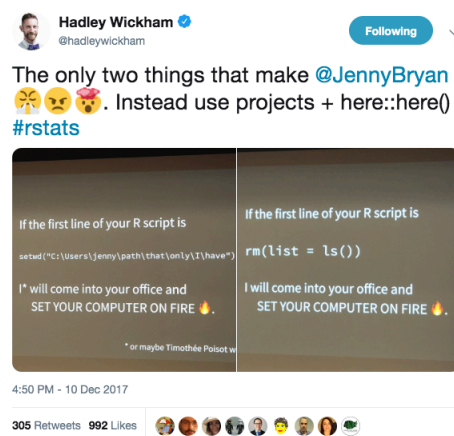


never saving my RStudio workspace when I exit



working in RStudio with data and scripts in the right folders

R-Ladies Sydney



here::here()

Where did you learn that?

working in **RStudio** connected
to my own public **GitHub**
repository

Happy Git and GitHub for the useR

Jenny Bryan, the STAT 545 TAs, Jim Hester

Let's Git started

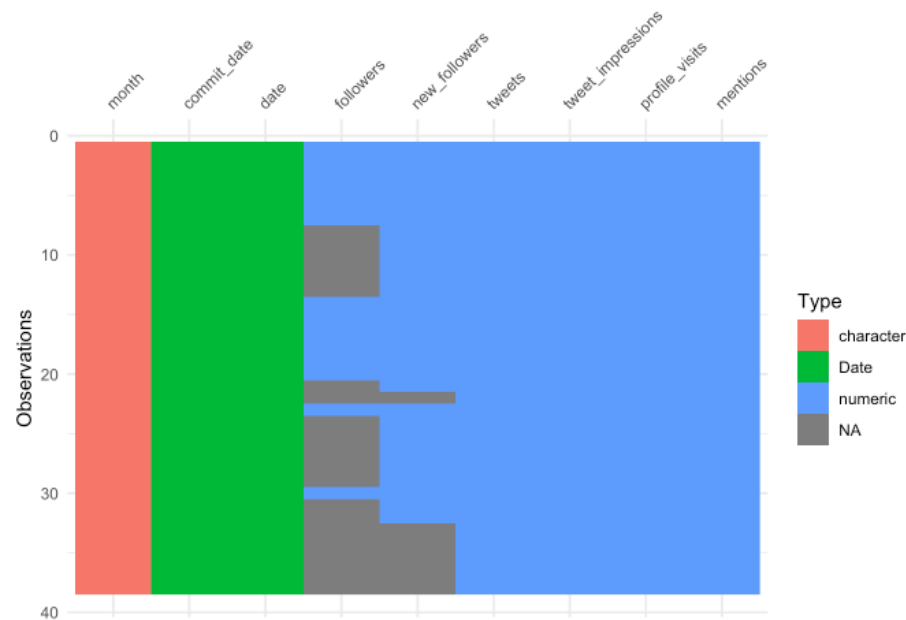


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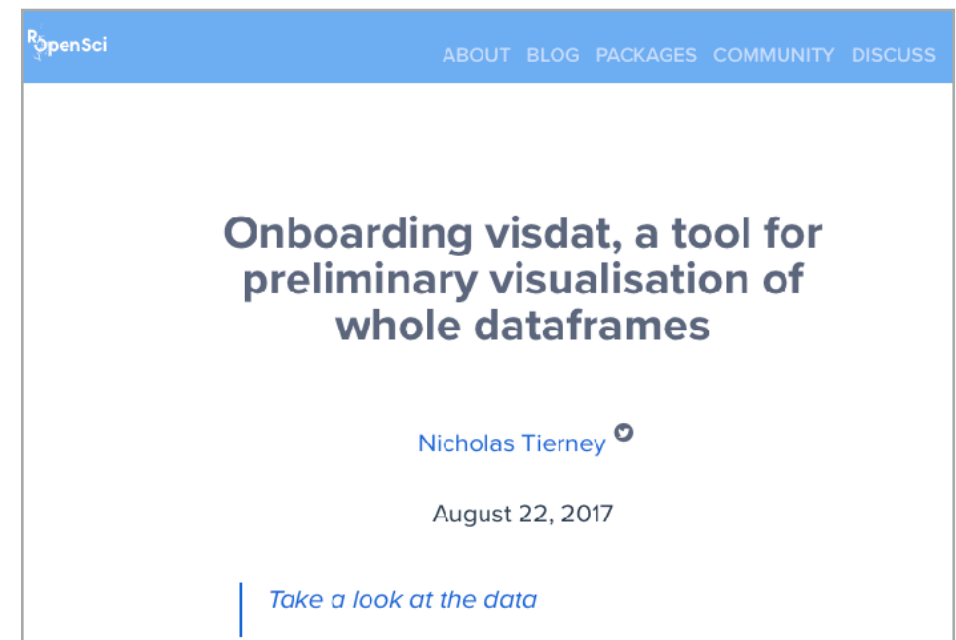
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The rOpenSci blog!

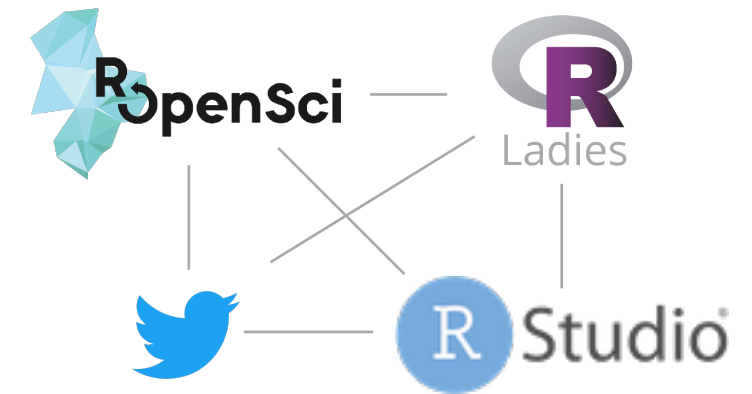


Where did you learn that?

“wait, my x-axis of dates sorted itself alphabetically?!”

lubridate!

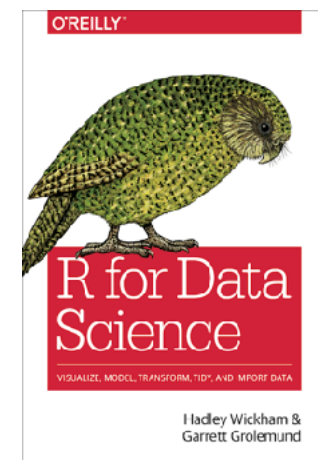
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3 to my success

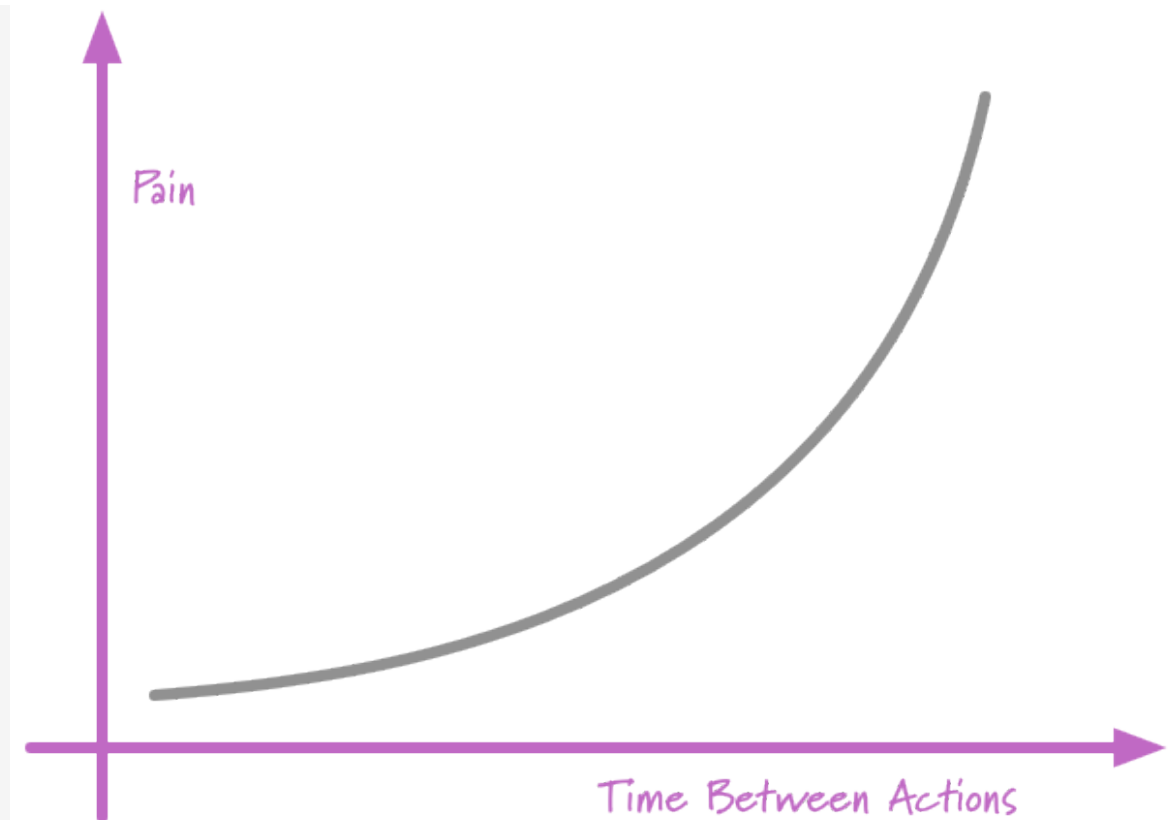
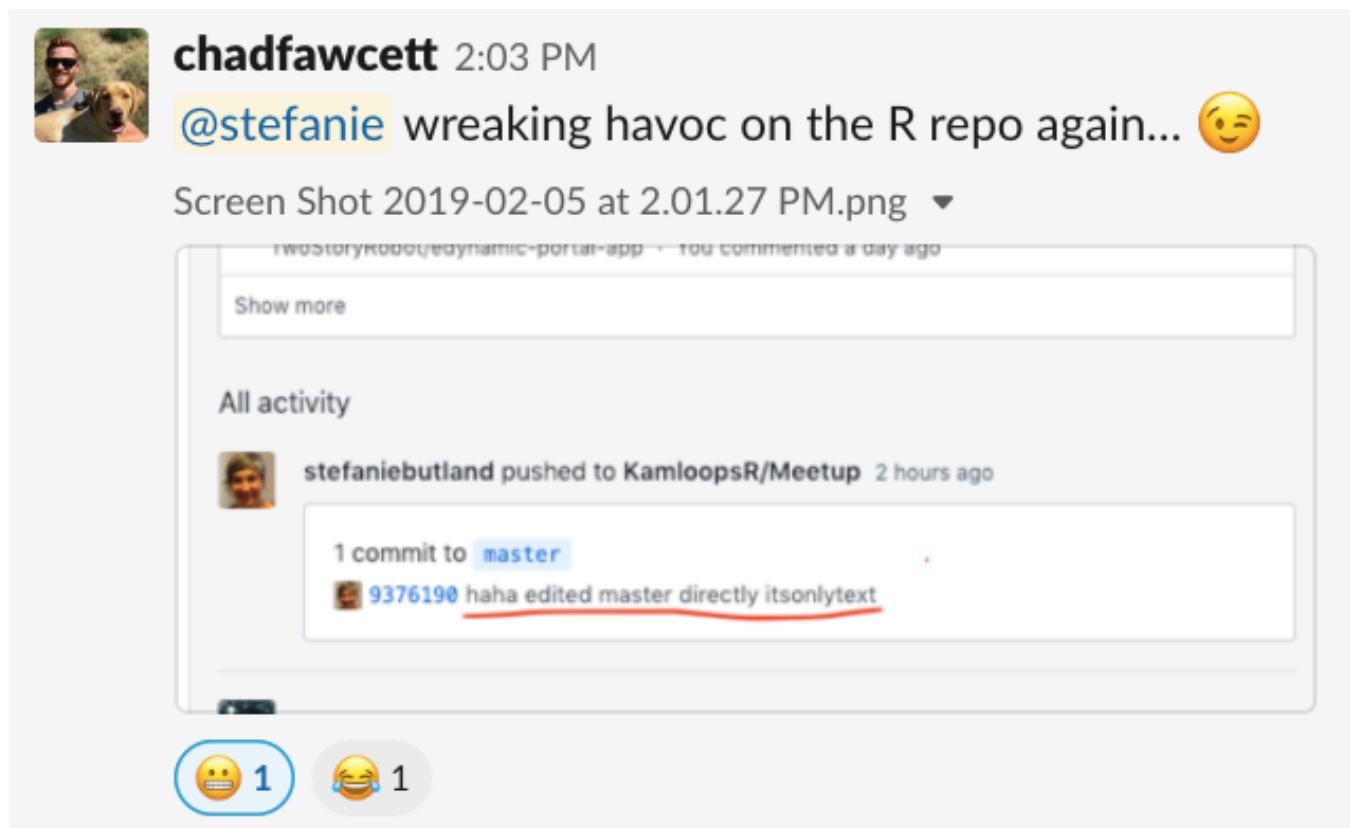
- in-person and online trust network
- a specific modest project
- the “right” tutorials and resources for me

“Suck until you don't”

–Pat Schloss

“If it hurts, do it more often”

- Martin Fowler h/t Jenny Bryan



Appreciation

Kara Woo and Monica Gerber for saying this is a talk they'd like to hear

Maëlle Salmon for talk feedback

rOpenSci team for sustaining a values-driven organization

Get Involved!

 @rOpenSci - <https://ropensci.org/community/>
https://ropensci.github.io/dev_guide/

 @TheCSCCE - Community Management

 @StefanieButland