```
library(dplyr)

rladies_global %>%
  filter(city == 'Lancaster')
```



# 10 Steps to Becoming a Tidyverse Contributor





# Nic Crane @nic\_crane

#### Who here...

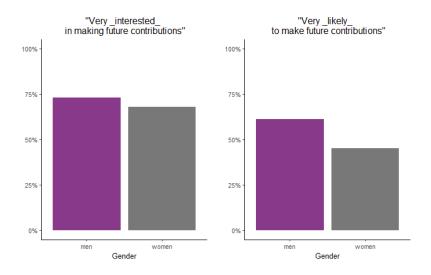


- Knows what the Tidyverse is?
- Tweets about R?
- Blogs about R?
- Has written an R function?
- Uses git?
- Has written an R package?
- Has a package on CRAN?
- Has contributed to a Tidyverse package?

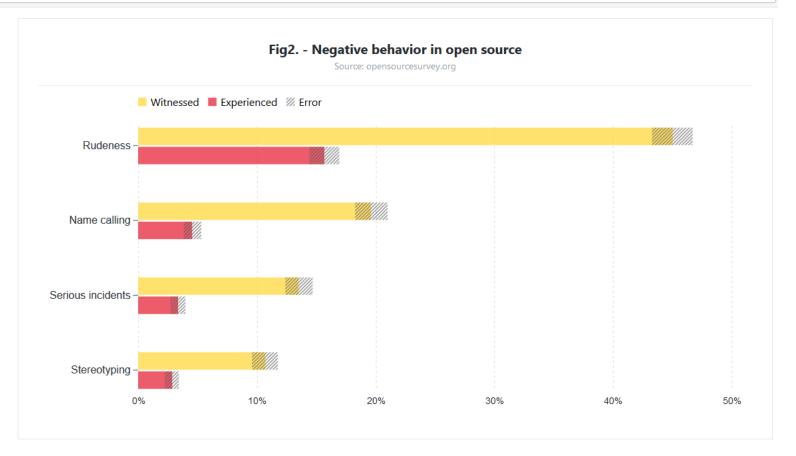


The gender imbalance in open source remains profound...Open source contributors don't yet reflect its broad audience of users

—GitHub Survey 2017















### **How Does R Compare?**



2012: RLadies Founded 2015: R

Forward s set up

2017: "The R community is one of R's best features"

2011: rOpenSci Founded

2015: R Consortium established 2016:
"The R
communit
y is
awesome
(and
fast)"

2017: RStudio Communit y Forums goes live



### Why Should You Contribute?

#### **GITHUB SURVEY 2017**

- "Half of contributors say that their open source work was somewhat or very important in getting their current role."
- "Open source work helps people build their professional reputation."
- "Improving contributor representation can help create a more representative tech sector overall."



### Why Should You Contribute?

#### **MY PERSONAL REASONS**

- Improve code knowledge
- Interact with the community
- Overcome Lessen imposter syndrome



When I started my transition into data science, I said yes to pretty much every opportunity that came my way, even if it felt slightly beyond my skill set or experience level...I said yes to many of these things when it felt like I wasn't sure if I was ready.



—Julia Silge Interview with And Comfort (October 2018)



Not always easy for beginners. Helps to have a team that will onboard. Give beginner level work. Mentorship. Pick projects that are welcoming.



—Gabriela de Queiroz [summarised tweet]
Grace Hopper Celebration of Women in Computing (2018)

## The tidyverse is a great place to get involved



#### Contribute to the tidyverse

The tidyverse would not be possible without the contributions of the R community. No matter your current skills, it's possible to contribute back to the tidyverse.

#### Answer questions

The easiest way to help out is to answer questions. You won't know the answer to everything, but that's ok! Even just the acknowledgement that someone cares enough to try can be tremendously encouraging.

Many people asking for help, don't know about reprexes. A little education, and some help crafting a reprex can go a long way. You might not answer the question, but you'll help someone answer it more easily.

If you're interested in answering questions, some good places to start are the RStudio community site, or the tidyverse tags on Twitter and Stack Overflow. Just remember that while you might have seen the problem a hundred times before, it's new to the person asking it. Be patient, polite, and empathic.

#### File issues

If you've found a bug, first create a minimal reprex. Spend some time trying to make it as minimal as possible: the more time you spend doing this, the easier it will be for the tidyverse team to fix it. Then file it on the GitHub repo of the appropriate package.

To be as efficient as possible, development of tidyverse packages tends to be very bursty. Nothing happens for a long time, until a sufficient quantity of issues accumulates. Then there's a burst of intense activity as we focus our efforts. That makes development more efficient because it avoids expensive context switching between problems. This process makes a good reprex particularly important because it might be multiple months between your initial report and when we start working on it. If you can't reproduce the bug, we can't fix it!

beginner-friendly

help wanted

good first issue



# Step 1 Decide How to Contribute



- Identifying issues
- Documentation
- Helping people out on Twitter and forums
- Blogging
- Code

#### Step 2 Learn!



- R functions
- git (clone, commit, push)
- Building R packages (basics)
- GitHub making a pull request

### **Step 3 Find an Issue**



beginner-friendly

help wanted

good first issue

### **Step 3 Find an Issue**





broom: Convert Statistical Analysis Objects into Tidy Tibbles

Summarizes key information about statistical objects in tidy tibbles. This makes it easy to report results, create plots and consistently work with large numbers of models at once. Broom provides three verbs that each provide different types of information about a model. tidy() summarizes information about model components such as coefficients of a regression. glance() reports information about an entire model, such as goodness of fit measures like AIC and BIC. augment() adds information about individual observations to a dataset, such as fitted values or influence measures.

Version: 0.5.0 Depends:  $R (\ge 3.1)$ 

Imports: <u>backports</u>, <u>dplyr</u>, methods, <u>nlme</u>, <u>purrr</u>, <u>reshape2</u>, <u>stringr</u>, <u>tibble</u>, <u>tidyr</u>

Suggests: AER, akima, AUC, bbmle, betareg, biglm, binGroup, boot, brms, btergm, car, caret, coda, covr, e1071, emmeans, ergm, gam (≥ 1.15), gamlss, gamlss.data,

gamlss.dist, geepack, ggplot2, glmnet, gmm, Hmisc, irlba, joineRML, Kendall, knitr, ks, Lahman, lavaan, lfe, lme4, lmodel2, lmtest, lsmeans, maps, maptools, MASS, Matrix, mclust, mgcv, muhaz, multcomp, network, nnet, orcutt ( $\geq$  2.2), ordinal, plm, plyr, poLCA, psych, quantreg, rgeos, rmarkdown, robust, rsample,

rstan, rstanarm, sp, speedglm, statnet.common, survey, survival, testthat, tseries, xergm, zoo

Published: 2018-07-17

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[ctb]

Maintainer: David Robinson <admiral.david at gmail.com>
BugReports: http://github.com/tidvverse/broom/issues

License:  $\underline{MIT}$  + file  $\underline{LICENSE}$ 

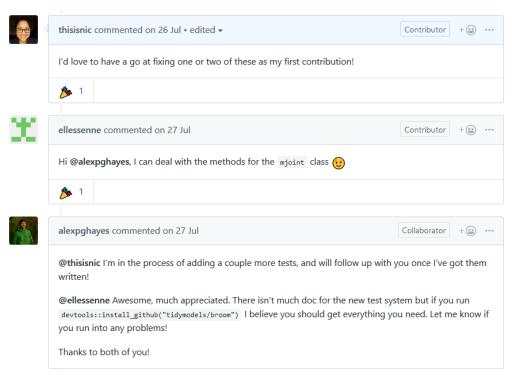
URL: <a href="http://github.com/tidyverse/broom">http://github.com/tidyverse/broom</a>

NeedsCompilation: no

Materials: <u>README NEWS</u>

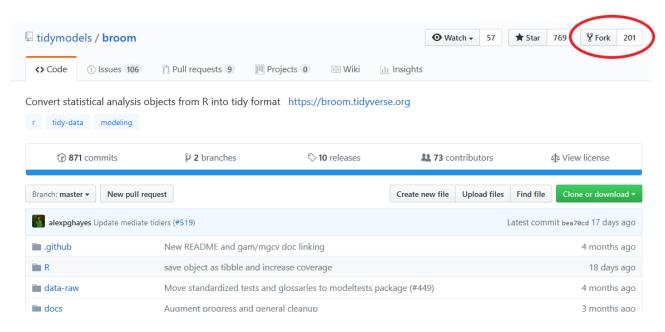
# **Step 4 Ask if You Can Help**





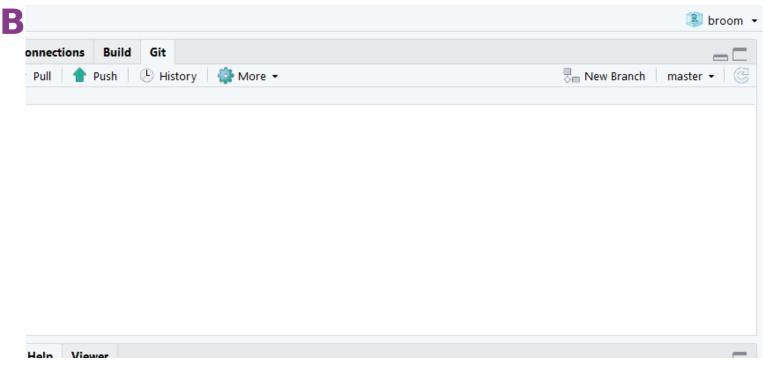








### **Step 6 Open in RStudio & Make a**



#### Step 7 **Familiarise Yourself with the**

```
Coce etest-stats-kmeans.R × Mo NEWS.md × estats-kmeans-tidiers.R ×
                        Run > Source -
                    1 context("stats-kmeans")
                       skip_if_not_installed("modeltests")
                       library(modeltests)
                    6 set.seed(2)
                       x <- rbind(
                         matrix(rnorm(100, sd = 0.3), ncol = 2).
                         matrix(rnorm(100, mean = 1, sd = 0.3), ncol = 2)
                   10
                   11
                   12 fit <- kmeans(x, 2)</pre>
                   13
                   14 - test_that("kmeans tidier arguments", {
                         check_arguments(tidy.kmeans)
                         check_arguments(glance.kmeans)
                         check_arguments(augment.kmeans, strict = FALSE)
                   18 })
                   19
                   20 # tidy.kmeans uses the orginal column names to name columns in output.
                   21 # Therefore, strict must be set to FALSE for this test to pass.
                   22 - test_that("tidy.kmeans", {
                         td <- tidy(fit)
                         check_tidy_output(td, strict = FALSE)
                   25 })
                   26
                   27 - test_that("tidy.kmeans", {
                         gl <- glance(fit)</pre>
                        check_glance_outputs(gl)
                   30 })
                   31
```



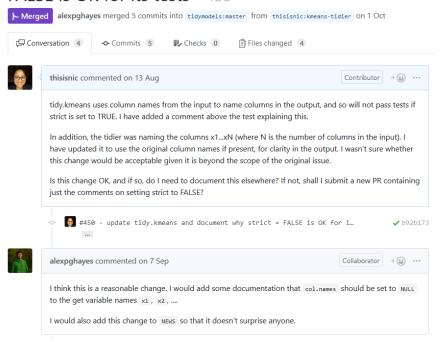


```
8 R/stats-kmeans-tidiers.R
      @@ -2,7 +2,7 @@
      #' @template title desc tidy
                                                                                                                         #' @template title desc tidy
      #' @param x A `kmeans` object created by [stats::kmeans()].
                                                                                                                         #' @param x A `kmeans` object created by [stats::kmeans()].
 5 - #' @param col.names Dimension names. Defaults to `x1, x2, ...`
                                                                                                                   5 + #' @param col.names Dimension names. Defaults to the names of the variables in x. Set to NULL to get
                                                                                                                       names `x1, x2, ...`.
       #' @template param unused dots
                                                                                                                         #' @template param unused dots
      #' @evalRd return_tidy("size", "withinss", "cluster")
                                                                                                                         #' @evalRd return_tidy("size", "withinss", "cluster")
      @@ -13,7 +13,11 @@
      #' @export
                                                                                                                         #' @export
      #' @seealso [tidy()], [stats::kmeans()]
                                                                                                                         #' @seealso [tidy()], [stats::kmeans()]
      #' @family kmeans tidiers
                                                                                                                         #' @family kmeans tidiers
- tidy.kmeans <- function(x, col.names = paste0("x", 1:ncol(x$centers)), ...) {</pre>
                                                                                                                       + tidy.kmeans <- function(x, col.names = colnames(x$centers), ...) {
                                                                                                                  17 +
                                                                                                                          if(is.null(col.names)){
                                                                                                                  19 +
                                                                                                                             col.names <- paste0("x", 1:ncol(x$centers))</pre>
                                                                                                                  20 + }
         ret <- as.data.frame(x$centers)
                                                                                                                           ret <- as.data.frame(x$centers)
         colnames(ret) <- col.names</pre>
                                                                                                                           colnames(ret) <- col.names
         ret$size <- x$size
                                                                                                                           ret$size <- x$size
```

### **Step 9 Submit PR and Wait**



#450 - update tidy.kmeans and document why strict = FALSE is OK for its tests #486



# Step 10 Celebrate! Then Encourage Others to Get Involved and Share

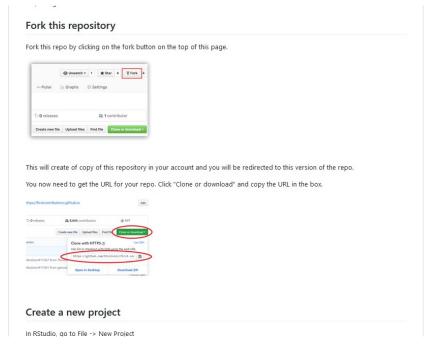






repo!

https://github.com/thisisnic/first-contributions





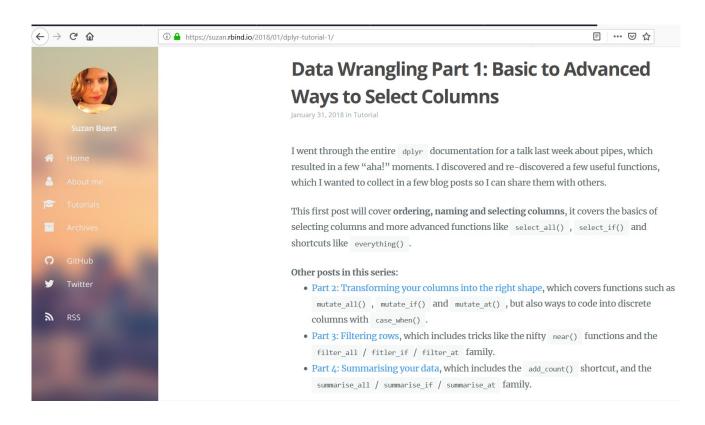
# Other ways to get involved



- Blogging
- Screencasts
- Tweets
- GitHub gists

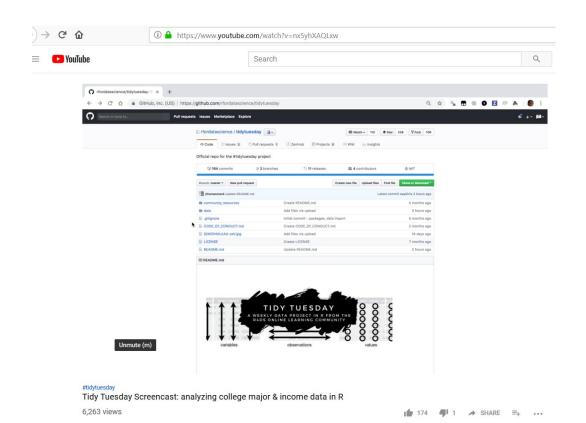
#### **Blogging**





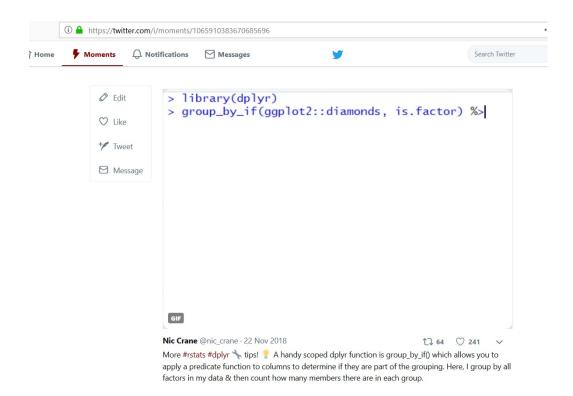
#### **Screencasts**





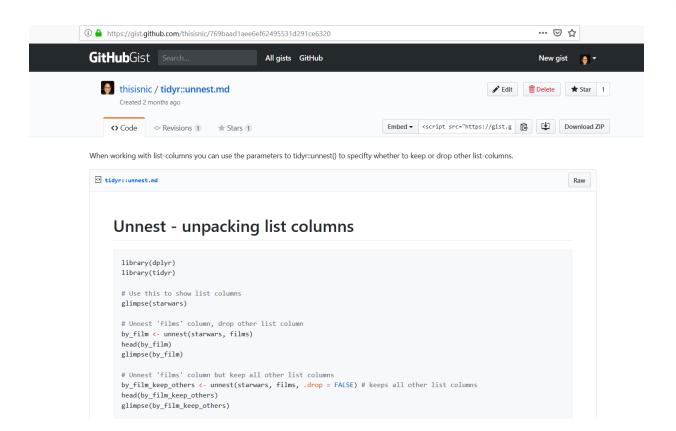
#### **Tweeting**













## "The unreasonable effectiveness of public work" - David Robinson

#### How I used to think of my goals:



#### How I should have been thinking of them:





#### Resources

Talk by Mara Averick on contributing:

https://www.rstudio.com/resources/videos/contributing-to-tidyverse-packages/

rOpenSci contributing guide:

https://ropensci.github.io/dev\_guide/contributingguide.html

Repo walking through making a pull request:

https://github.com/thisisnic/first-contributions

Guide to contributing code to the tidyverse:

https://www.tidyverse.org/articles/2017/08/contributing/

Talk by David Robinson on public work:

https://resources.rstudio.com/rstudio-conf-2019/the-unreasonable-effectiven ess-of-public-work



# Thanks! 4

Nic Crane @nic\_cran