



Hadley Wickham

@hadleywickham

Following



RStudio is hiring a director of education:
hire.withgoogle.com/public/jobs/rs.... Please
apply if you ❤️ #rstats and education!

4:50 PM - 17 Jan 2018

208 Retweets **312** Likes



RStudio's Mission:

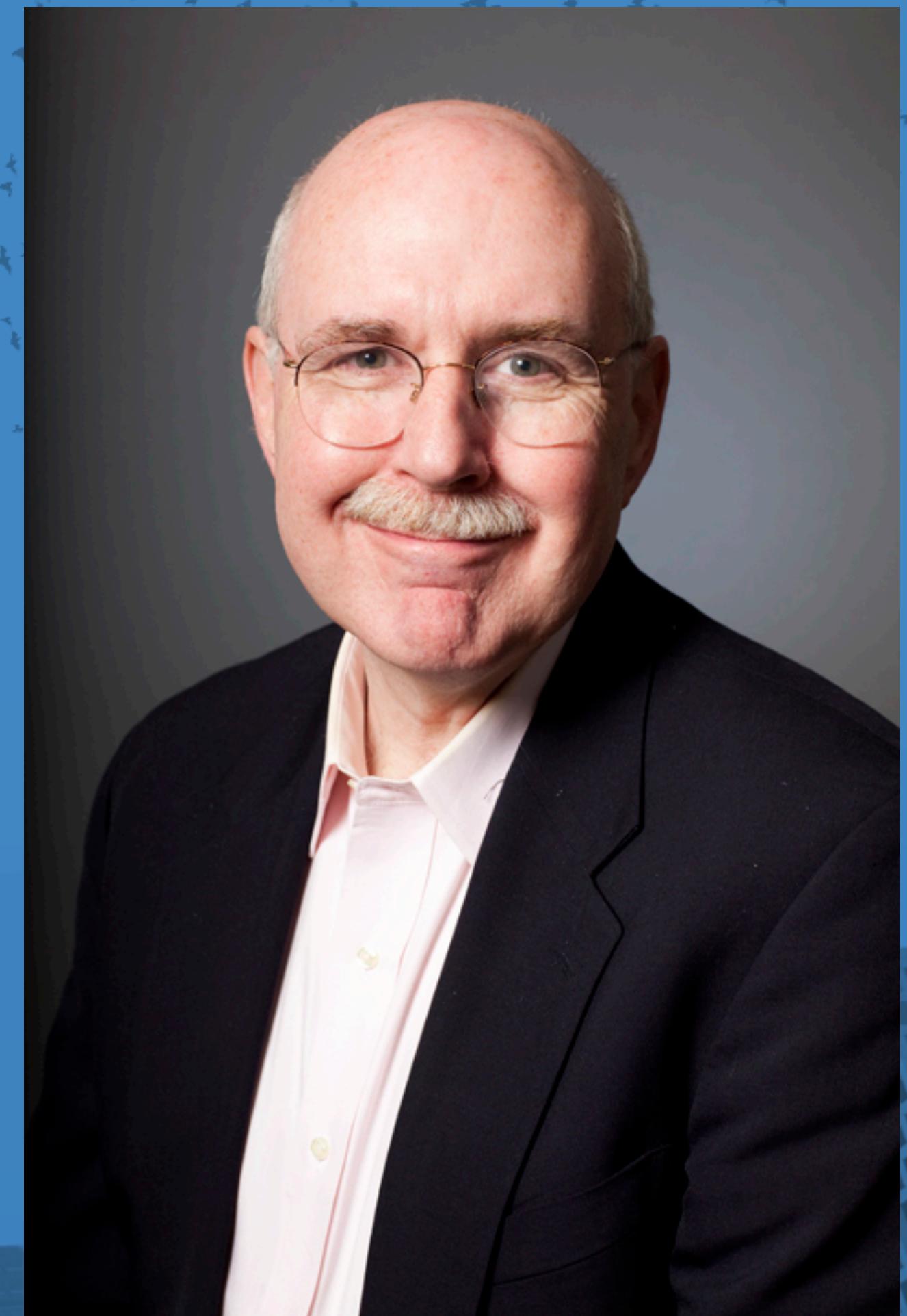
Equip everyone, regardless of means,
to participate in a global economy that
rewards data literacy

Carl Howe

Director of Education, RStudio

carl@rstudio.com

<http://carlhowe.com>



RStudio Education's mission:

Train the next million R users

#NextMillionRUsers



San Jose Population: 1,035,317



(I must attend rstudio::conf 2019!)

Number of Klingon Dictionaries sold: 300,000

But how?

- Who learns R?
- Why do they learn R?
- How do they learn R?
- What keeps them from learning R?



Carl Howe

@cdhowe

Do you wonder how and why people learn R? If you've learned or are planning to learn R, fill out our 5 minute survey, and we'll present the findings at rstudio::conf 2019 in Austin, TX. Full disclosure of how the data will be used is on the first page.

Learning R Survey
Survey creation: January 1, 2019

Learning R Survey



Carl Howe

@cdhowe

¿Prefieres hablar español y aprendiste o planeas aprender R? Por favor completa nuestra Encuesta de Aprendizaje de R. La declaración de cómo usaremos los datos está al comienzo de la encuesta. ¡Gracias @_lacion_ por la traducción!

Translate Tweet

Encuesta sobre Aprendizaje de R

Encuesta sobre Aprendizaje de R

RSTUDIO'S LEARNING R SURVEY

- Fielded on the Internet between December 6 and December 31, 2018
- Survey was fielded in both English and Spanish versions
- Respondents solicited from
 - community.rstudio.com
 - Twitter followers of RStudio employees and colleagues
 - [reddit.com/datasience](https://www.reddit.com/r/datasience)
- More than 3,000 English-speaking and almost 300 Spanish-speaking respondents
- RStudio is releasing raw data, results and processing code as open source today



rstd.io/learning-r-survey

RSTUDIO'S LEARNING R SURVEY

**WARNING: Significant sampling
bias may be present!**

**Results are not
necessarily representative of
the general R population!**

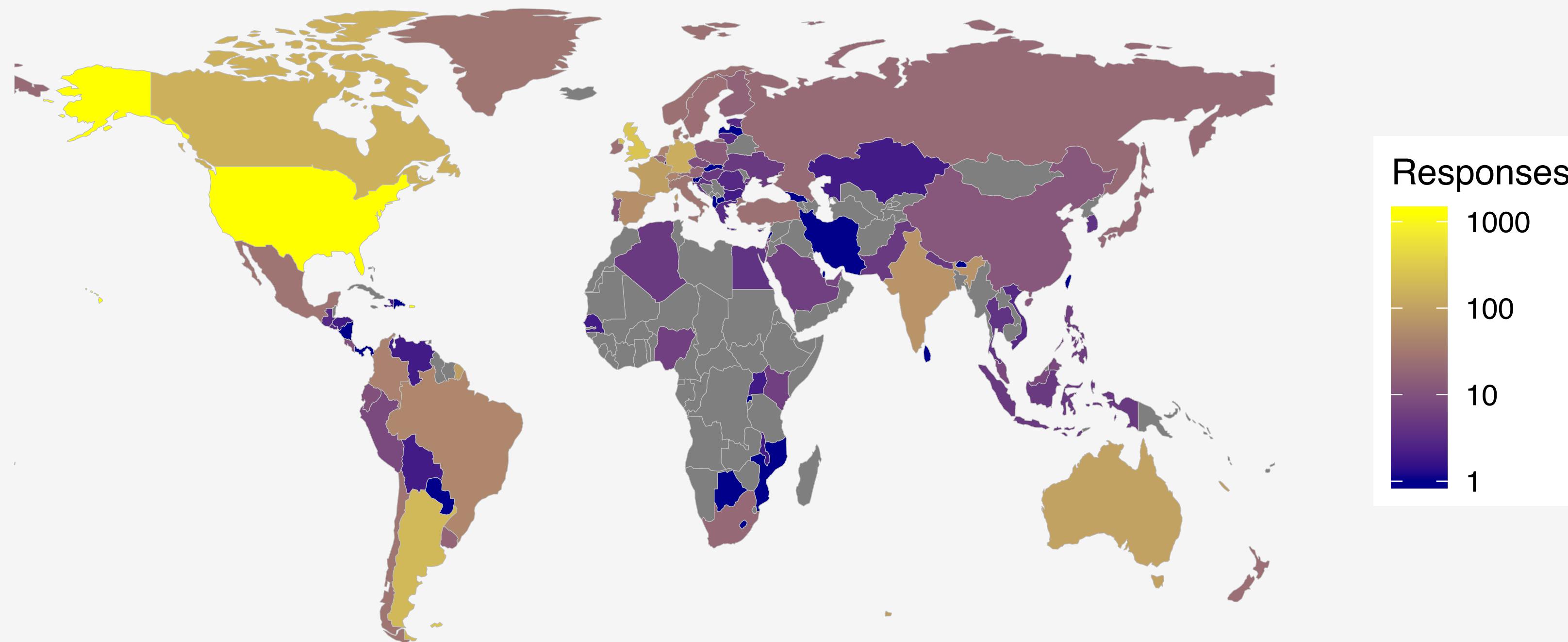


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WHO LEARNS R?

"In what country do you currently reside?"



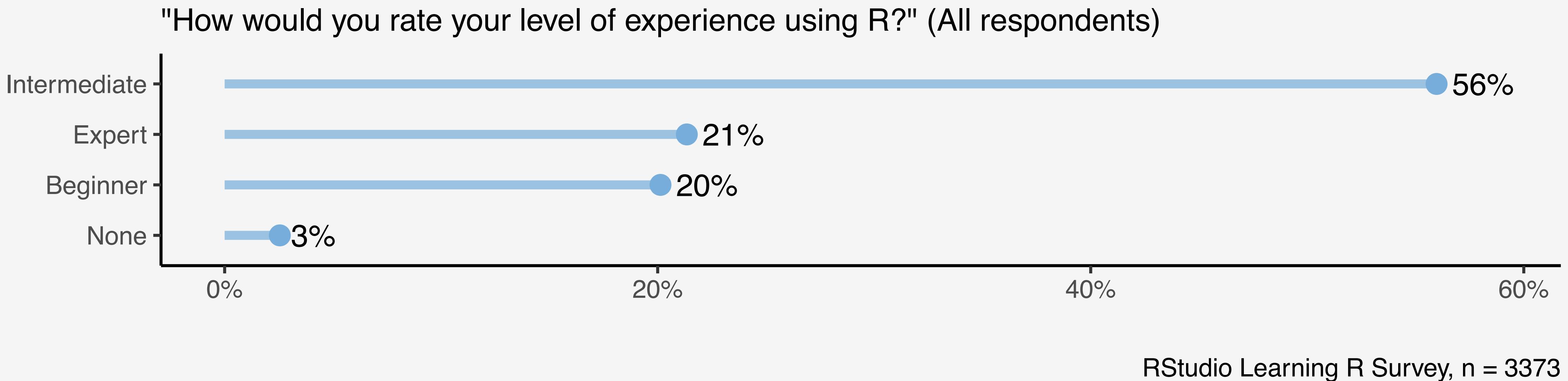
2018 RStudio Learning R Survey

#NextMillionRUsers

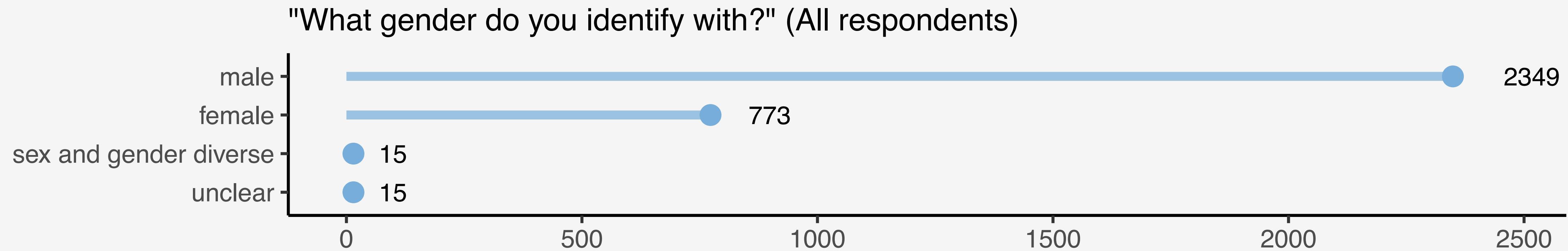
rstd.io/learning-r-survey

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MOST RESPONDENTS CONSIDER THEMSELVES INTERMEDIATE USERS



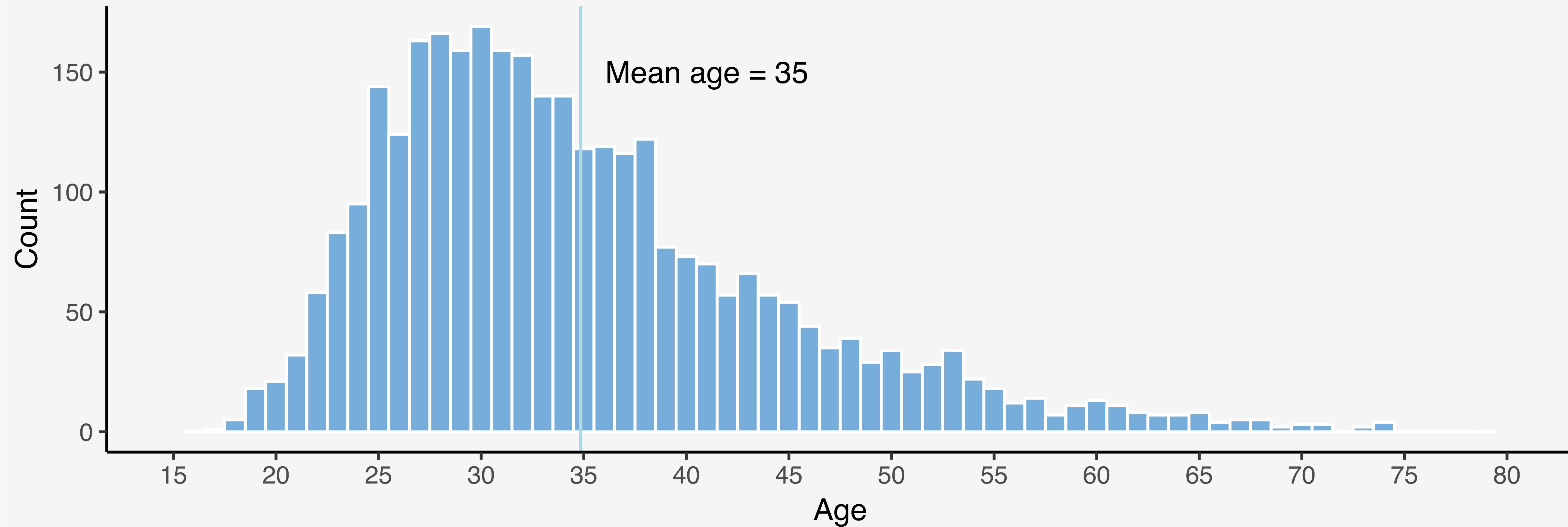
MALES MADE UP 75% OF RESPONDENTS



2018 RStudio Learning R Survey, n = 3152

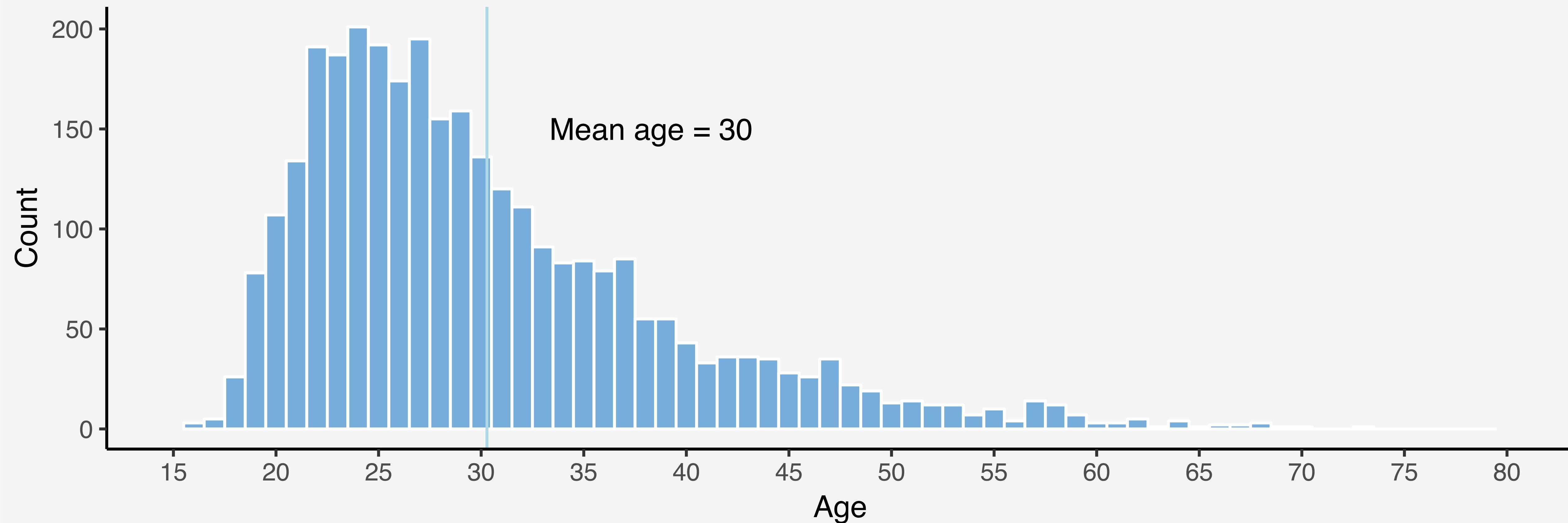
THE MEAN AGE WAS 35

Respondent Ages (Respondent counts shown, All respondents)



RESPONDENTS STARTED LEARNING R AT A MEAN AGE OF 30

Ages When Respondents Started Learning R (All Respondents)



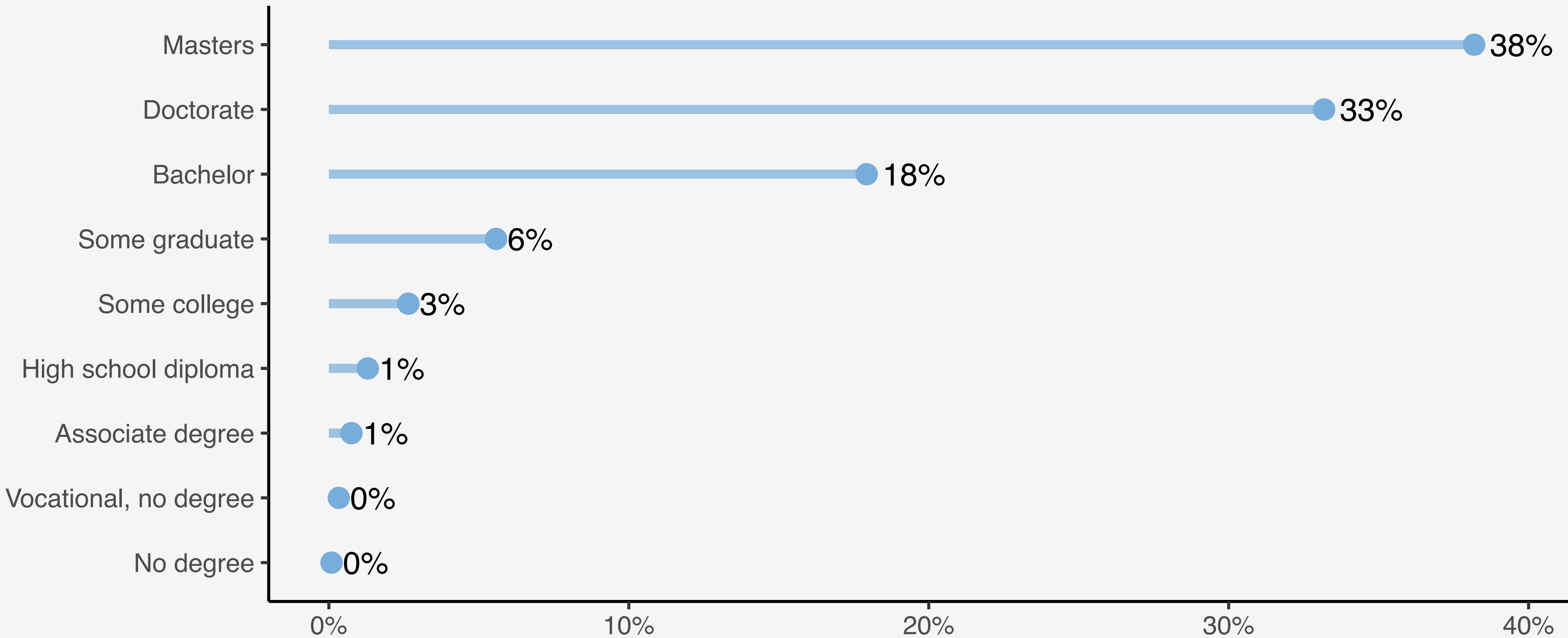
#NextMillionRUsers

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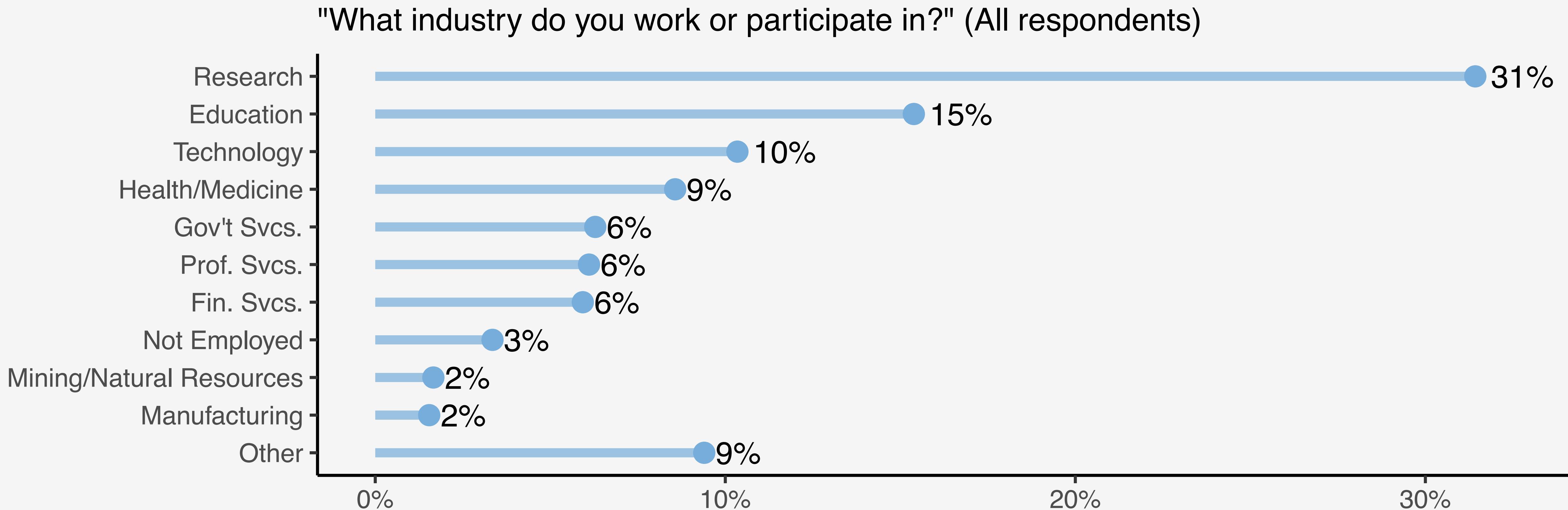
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MOST HAVE ADVANCED DEGREES

"What is the highest degree or level of school you have completed?
If currently enrolled, please use the highest degree received." (All respondents)



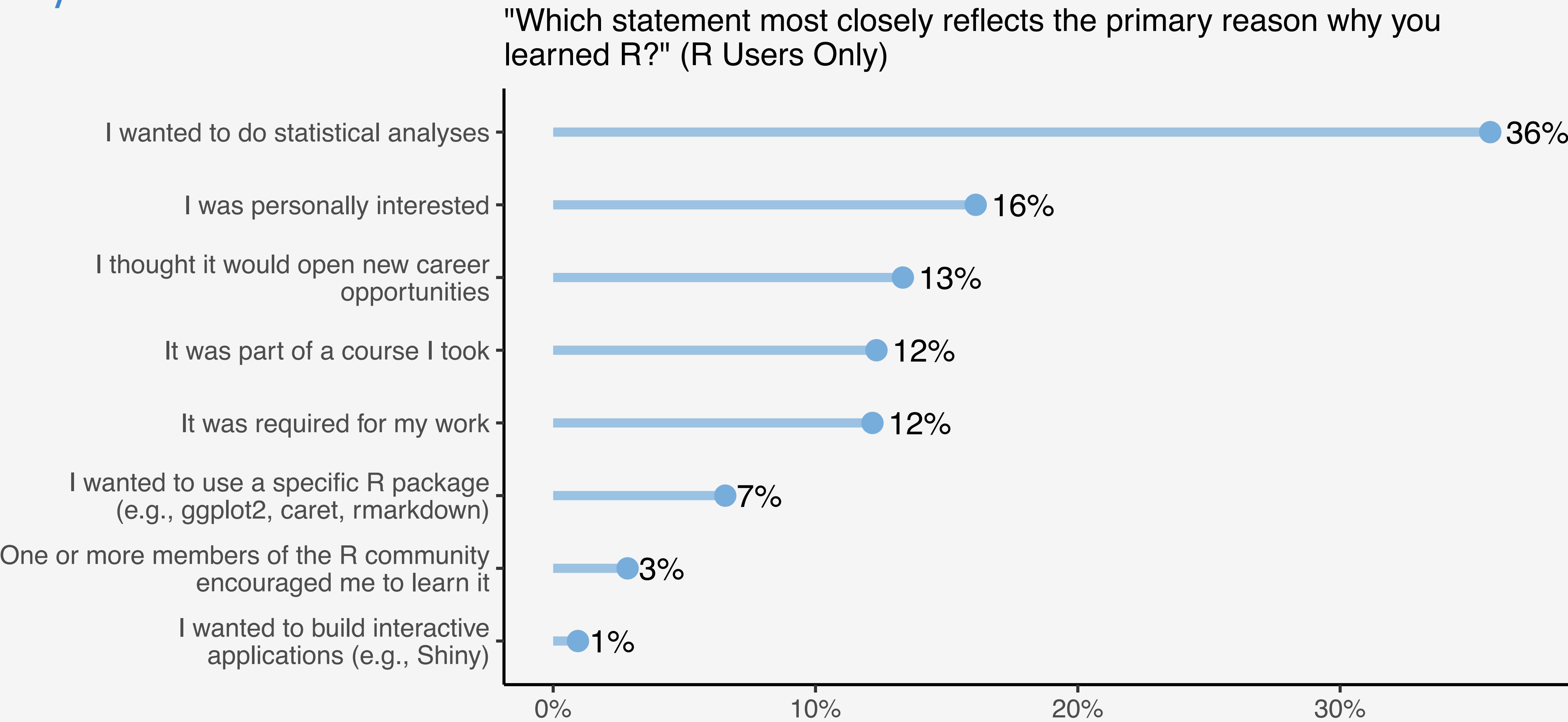
ALMOST HALF WORK IN RESEARCH OR EDUCATION



2018 RStudio Learning R Survey, n = 3373

- Who learns R?
- Why do they learn R?
- How do they learn R?
- What keeps them from learning R?

1/3 OF RESPONDENTS LEARNED R TO DO STATS



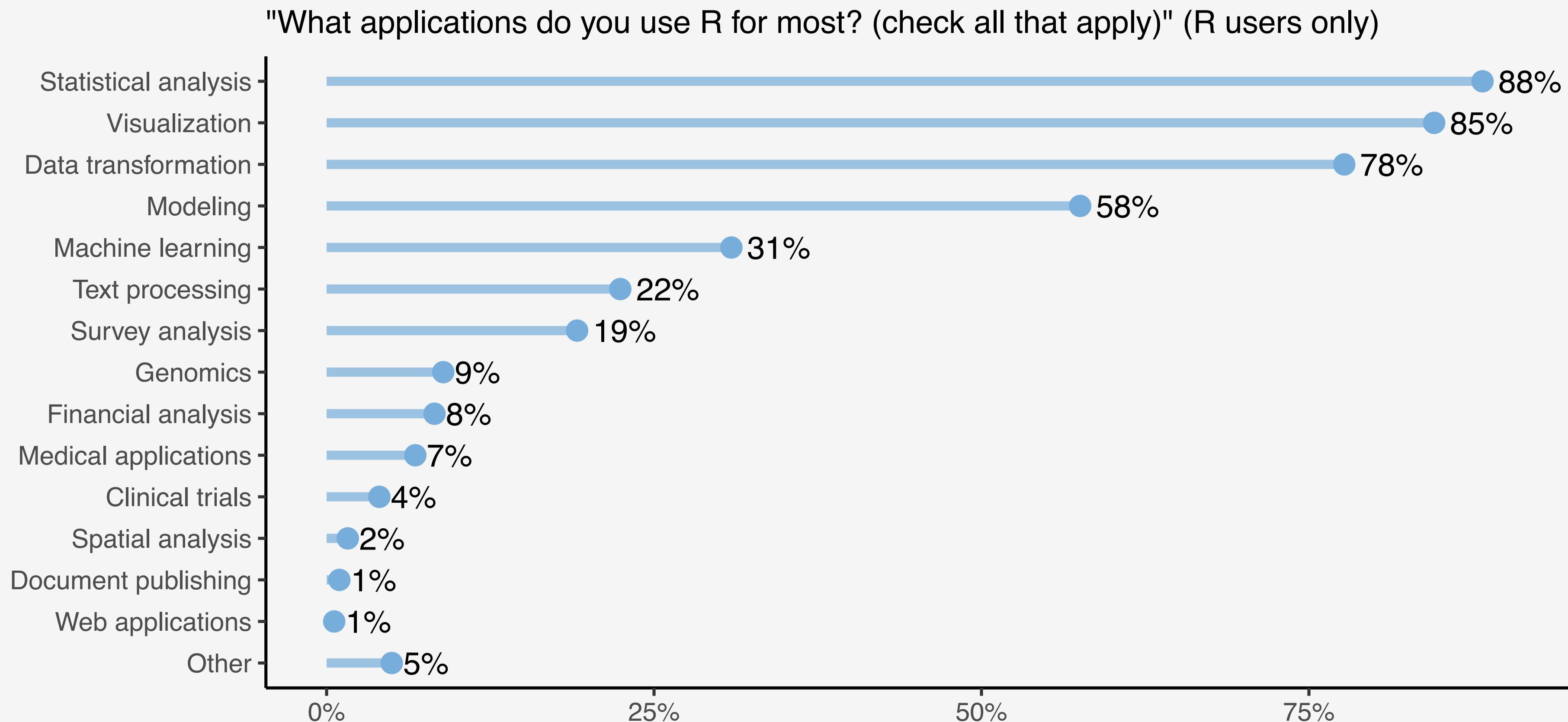
RStudio Learning R Survey, n = 3278

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STATS, VISUALIZATION, DATA TRANSFORMATION, AND MODELING APPS DOMINATE



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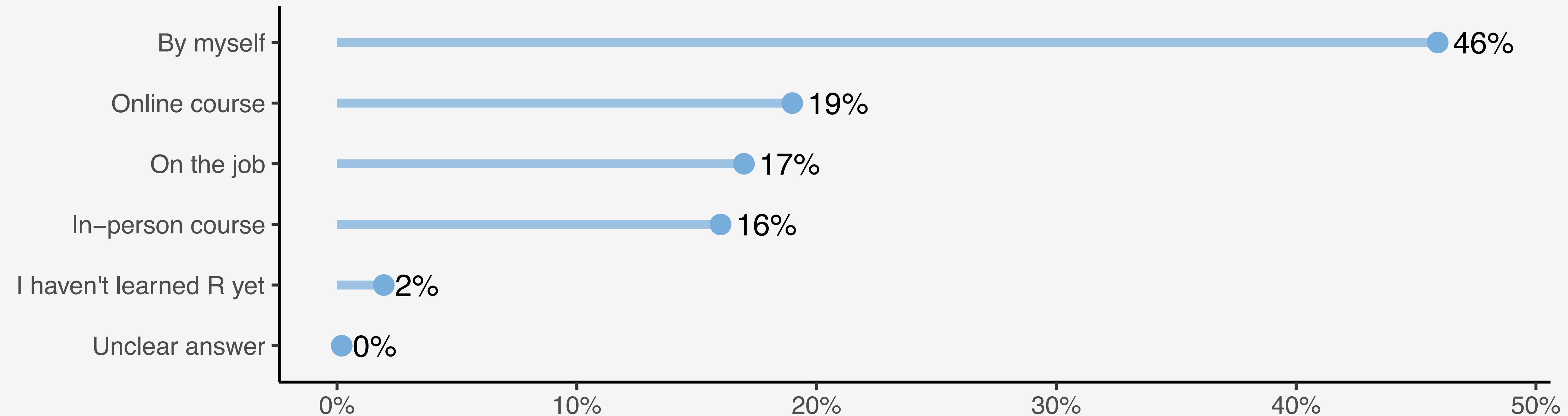
2018 RStudio Learning R Survey, n = 3278

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- Who learns R?
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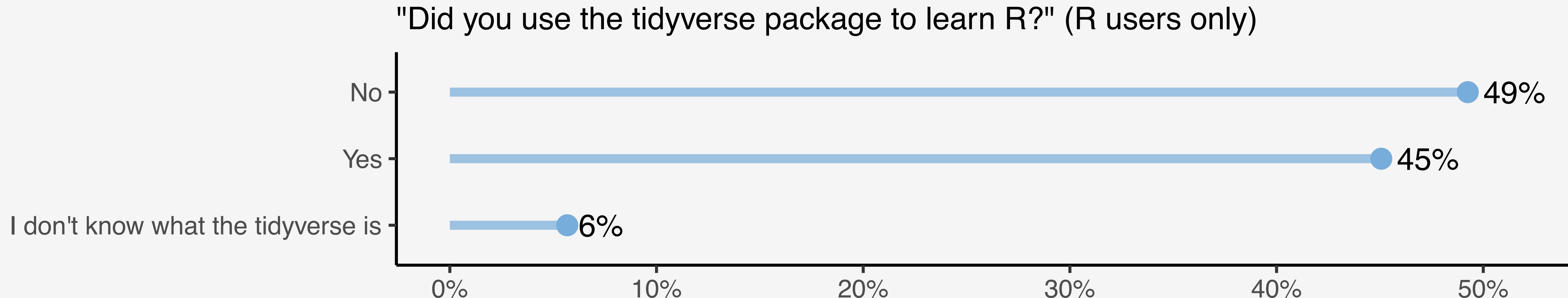
RESPONDENTS MOSTLY LEARNED R ON THEIR OWN

"How did you learn R? If you used multiple methods, please select the one you used the most." (R users only)



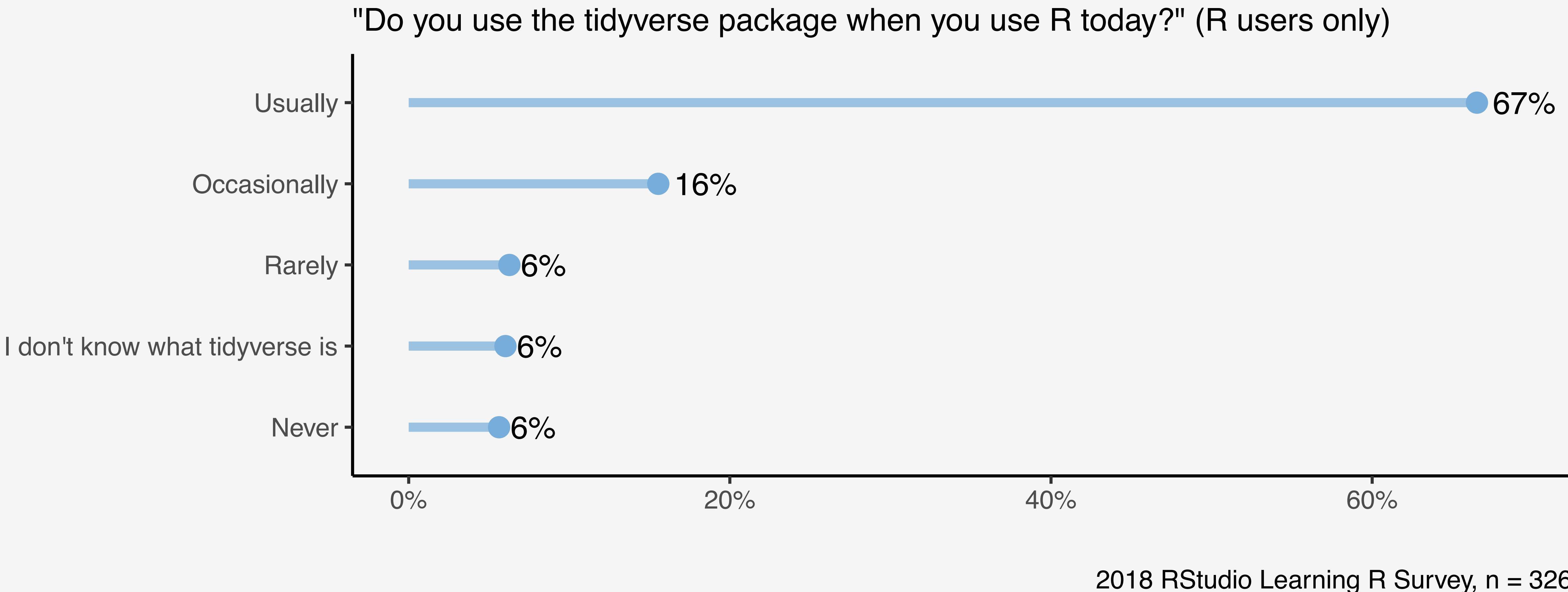
2018 RStudio Learning R Survey, n = 3076

LESS THAN HALF LEARNED USING TIDYVERSE



2018 RStudio Learning R Survey, n = 3273

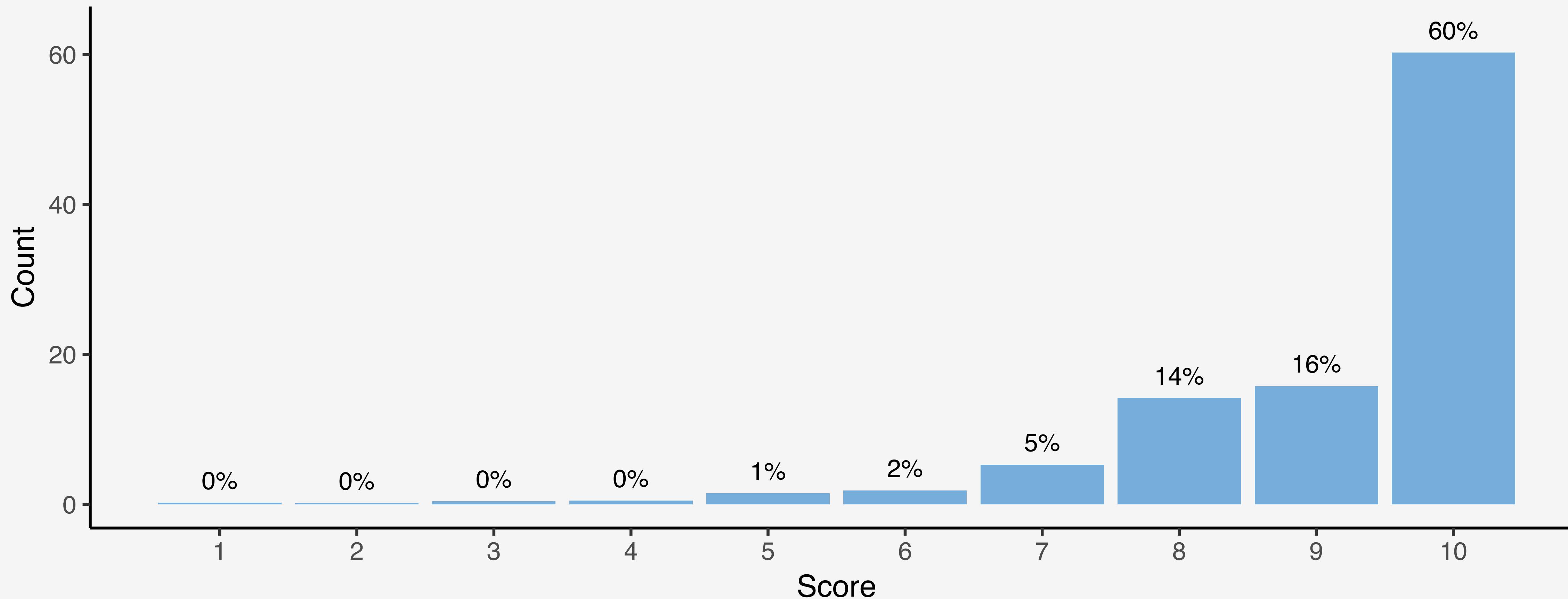
BUT TWO THIRDS USE TIDYVERSE TODAY



NEARLY EVERYONE RECOMMENDS R TO OTHERS

"How likely are you to recommend R to a colleague, friend, or family member?" (R users only)

Net Promoter Score = 71, Rating: Excellent



#NextMillionRUsers

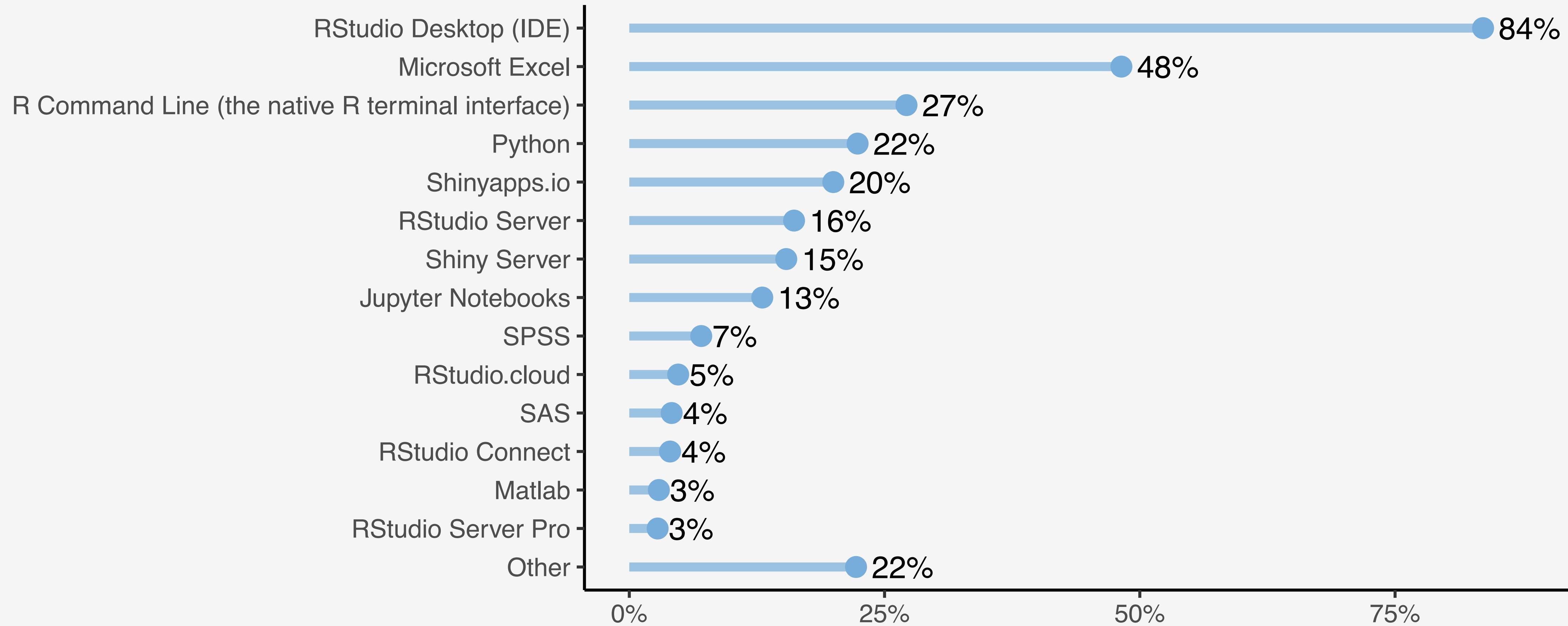
rstd.io/learning-r-survey

2018 RStudio Learning R Survey (R Users Only), n = 3278

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THE IDE AND EXCEL DOMINATE TOOL USE

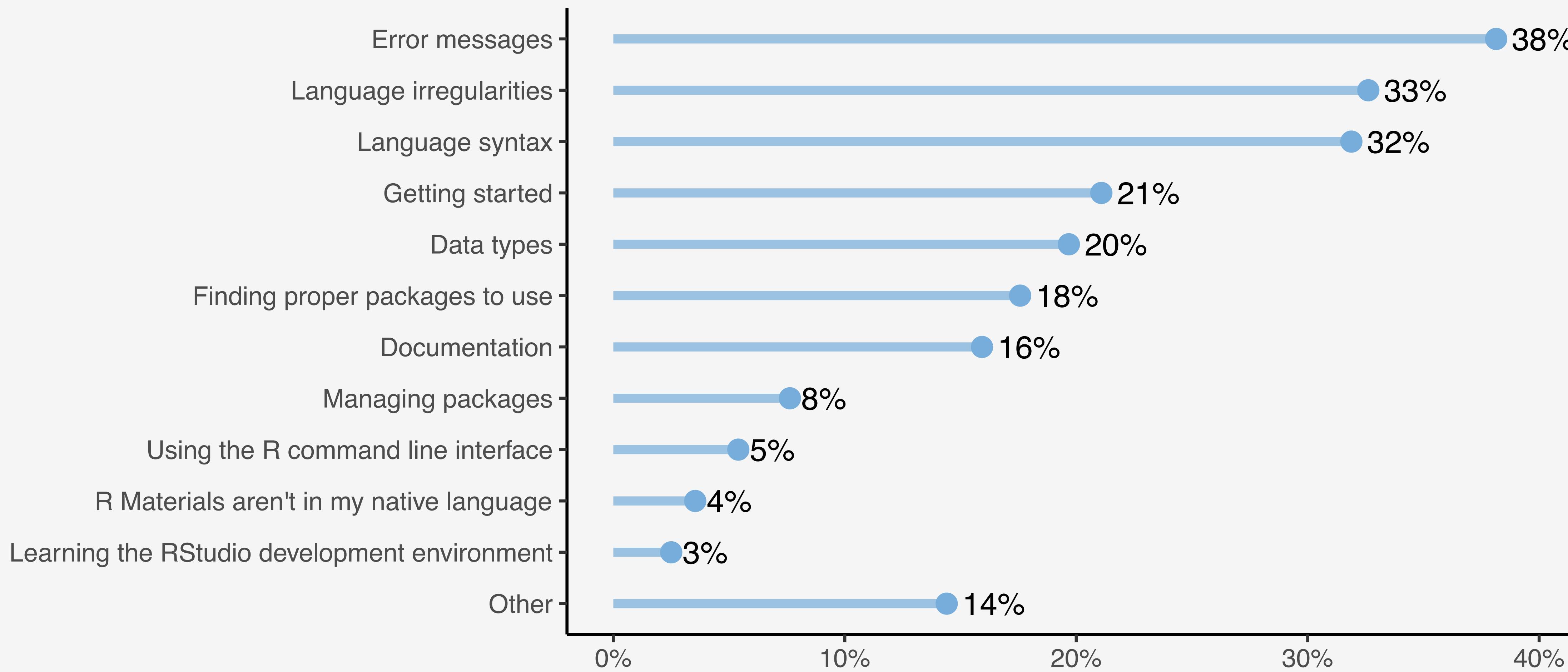
"Which tools do you use with your R applications?
(please check all that apply)" (R users only)



- Who learns R?
- Why do they learn R?
- How do they learn R?
- What keeps them from learning R?

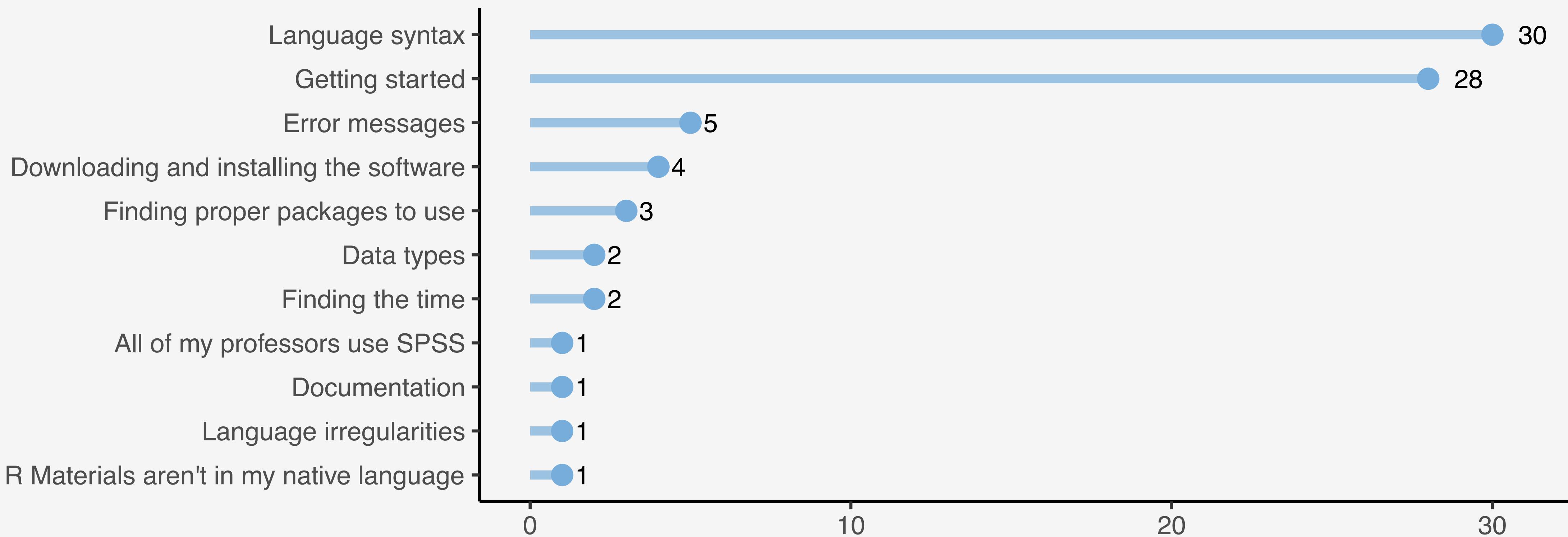
PEOPLE WHO KNOW R FIND ERROR MESSAGES MOST DIFFICULT

"What was most difficult for you in learning R?" (R users only)



NON-USERS FIND LANGUAGE SYNTAX AND GETTING STARTED MOST DIFFICULT

"What do you think is the biggest obstacle you must overcome in trying to learn R? The choices below are only suggestions; if we haven't listed your obstacle, please choose "Other" and add your obstacle in the text." (Number of mentions shown, non-R users only)



CONCLUSIONS FROM THE DATA

- The majority of R users are experienced and sophisticated researchers
- Most people learn R by themselves, not in formal courses
- One of the biggest challenges for learners is getting started

What Can We Do?

WE CAN OFFER R LEARNERS MORE...

More teachers



Hadley Wickham



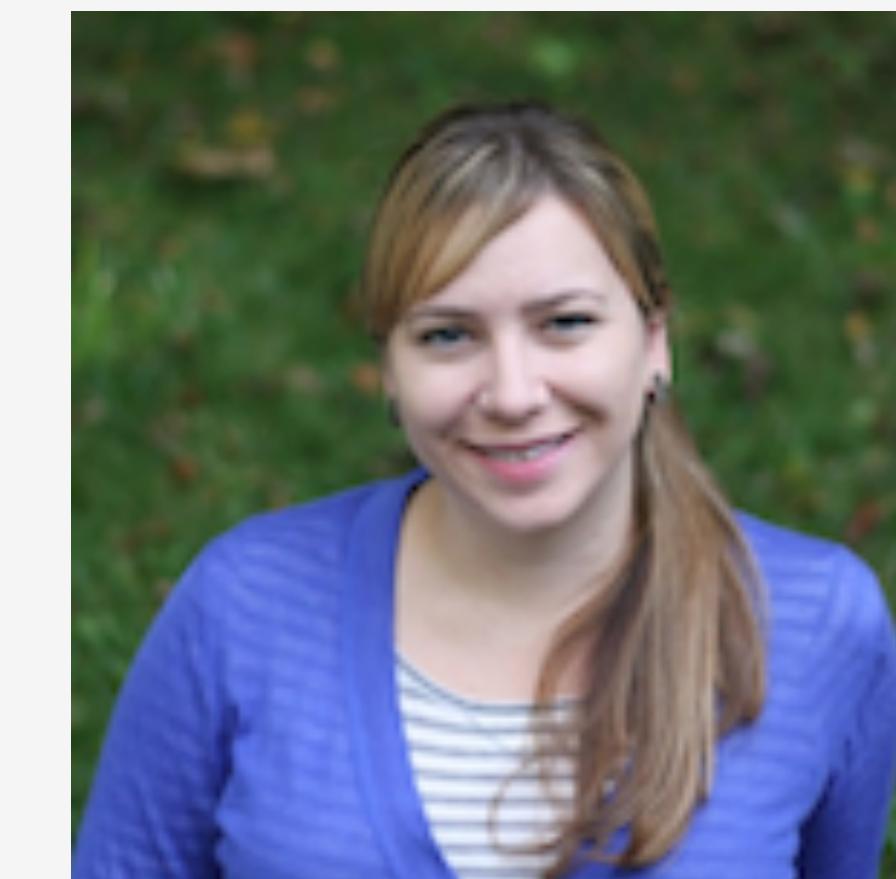
Jenny Bryan



Max Kuhn



Garret Grolemund



Mine Çetinkaya-Rundel

NEW ADDITIONS



Greg Wilson



Alison Hill

RSTUDIO CERTIFIED TEACHERS

- New program beginning this month
 - Two level program with instructors and coaches who train instructors
 - Certifies teaching skills and knowledge of RStudio tools
 - Headed up by RStudio's Greg Wilson, co-founder of Software Carpentry (greg.wilson@rstudio.com)



#NextMillionRUsers

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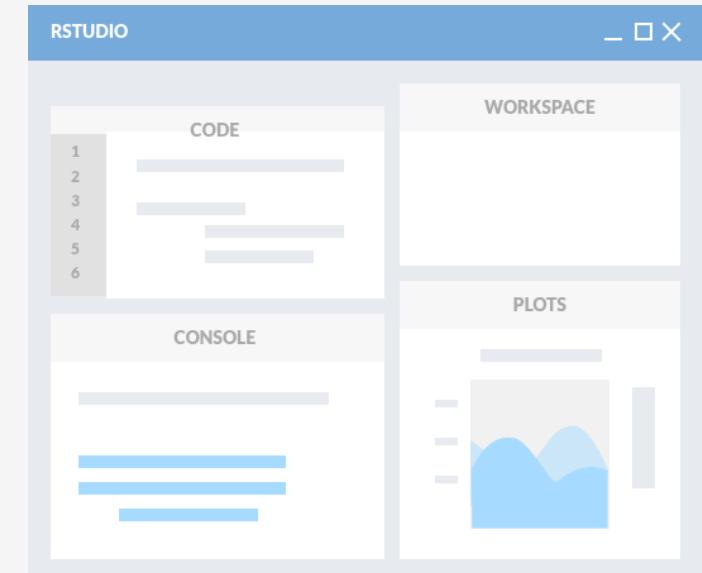
WE CAN OFFER R LEARNERS MORE...

More teachers

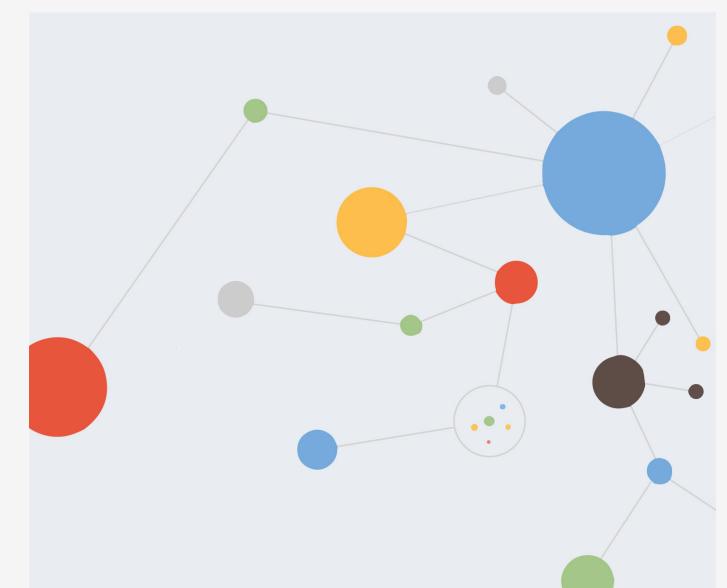
More tools

FREE ACADEMIC LICENSING FOR RSTUDIO PROFESSIONAL SOFTWARE

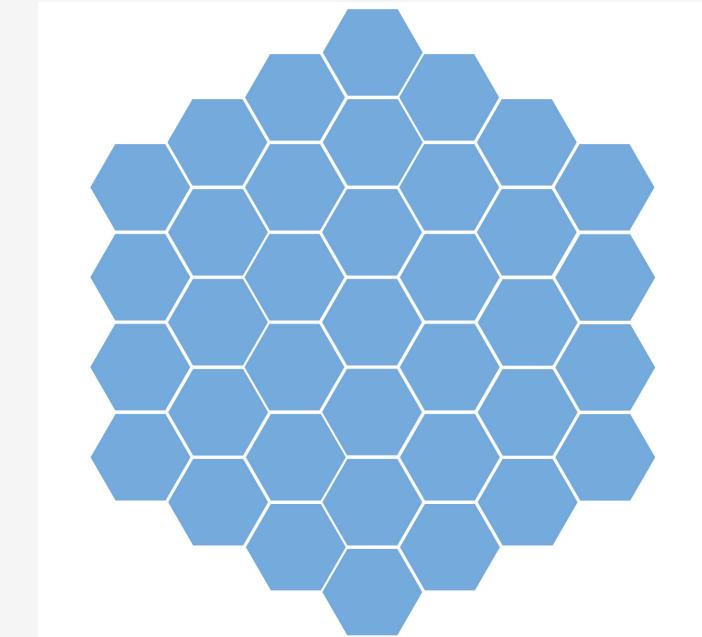
- In exchange for a course syllabus, any .edu academic can get any/all of our professional tools for free use in teaching
- Academic researchers not involved in teaching get 50% off
- <https://www.rstudio.com/pricing/academic-pricing/>



RStudio Server Pro



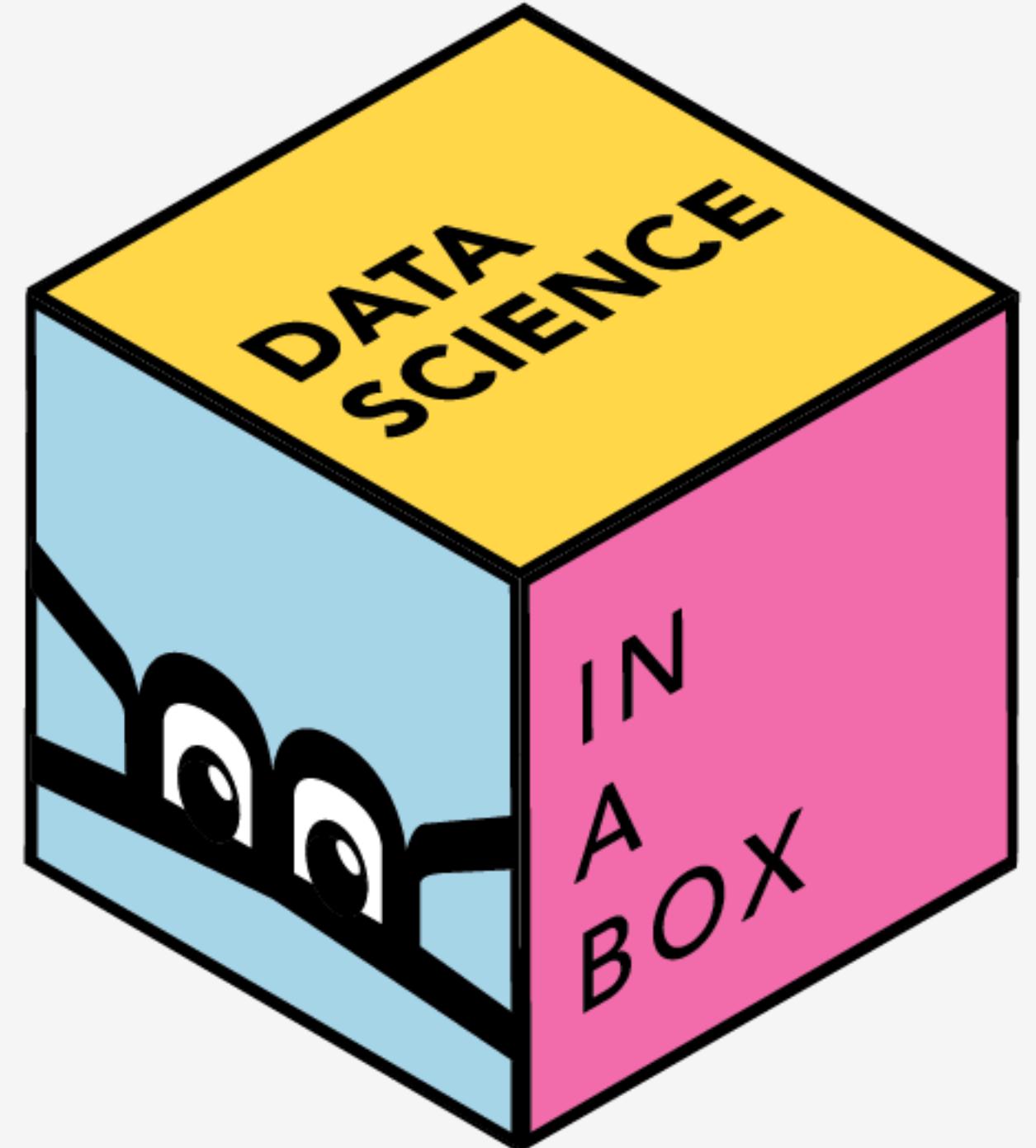
RStudio Connect



RStudio Package Manager

DATA SCIENCE IN A BOX

- An entire introduction to data science course, as taught at Duke University by Mine Çetinkaya-Rundel (mine@rstudio.com)
- Includes lectures, lecture notes, exercises, and homework
- Taught locally or on `rstudio.cloud`!
- <https://datasciencebox.org>



ONLINE BOOKS

Authors typically publish online as well as in hardcopy using bookdown/blogdown:

Wickham and Grolemund: <i>R for Data Science</i>	https://r4ds.had.co.nz
Wickham: <i>Advanced R</i>	https://adv-r.hadley.nz/
Xie, Thomas, and Hill: <i>blogdown: Creating Websites with R Markdown</i>	https://bookdown.org/yihui/blogdown/
Grolemund: <i>Hands on programming with R</i>	https://rstudio-education.github.io/hopr/
Lovelace, Nowosad, Muenchow: <i>Geocomputation in R</i>	https://geocompr.robinlovelace.net

RSTUDIO CLOUD SERVICE

- Cloud-hosted RStudio service
- Already in use by thousands of students
- Currently in alpha and free to use
- You'll hear more details about this from Mel Gregory (mel@rstudio.com) at 2:09 today
- Check out <https://rstudio.cloud>

#NextMillionRUsers

rstd.io/learning-r-s

The screenshot shows the RStudio Cloud landing page. At the top left is the R Studio Cloud logo. The main heading is "Welcome to RStudio Cloud alpha". Below it is the tagline "Do, share, teach and learn data science with R.". A prominent green button labeled "Get Started" is centered. At the bottom, a dark blue footer bar contains the text "If you already have an RStudio shinyapps.io account, you can log in using your existing credentials."

THE MISSION

We created RStudio Cloud to make it easy for professionals, hobbyists, trainers, teachers and students to do, share, teach and learn data science using R.

RSTUDIO PRIMERS

- Built into rstudio.cloud
- Easy way to get beginners started with no need for downloads and package loads

Learn Guide What's New **Primers** DataCamp Courses Cheat Sheets  Carl Howe

R Studio Primers

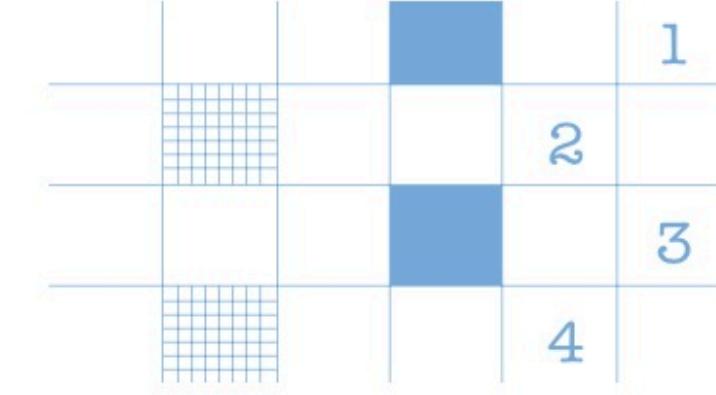
Learn data science basics with the interactive tutorials below.

The Basics



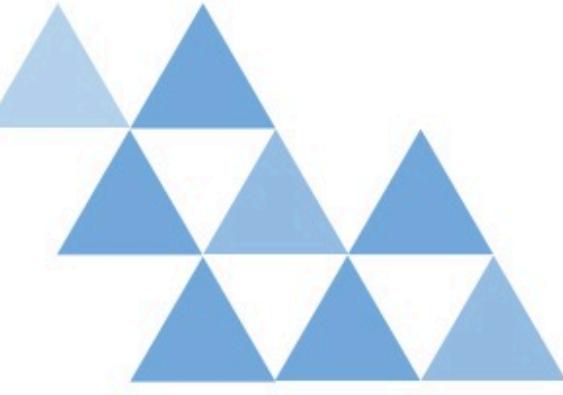
Start here to learn the skills that you will rely on in every analysis (and every primer that follows): how to inspect, visualize, subset, and transform your data, as well as how to run code.

Work with Data



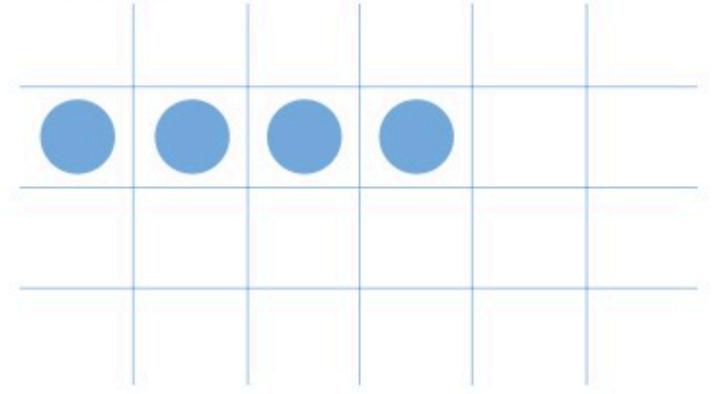
Learn the most important data handling skills in R: how to extract values from a table, subset tables, calculate summary statistics, and derive new variables.

Visualize Data



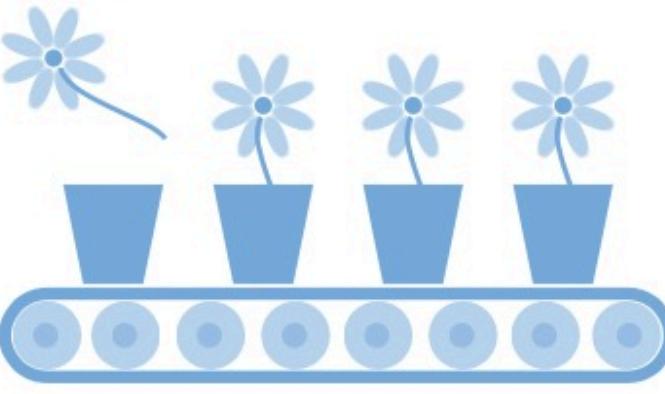
Learn how to use ggplot2 to make any type of plot with your data. Then learn the best ways to visualize patterns within values and relationships between variables.

Tidy Your Data



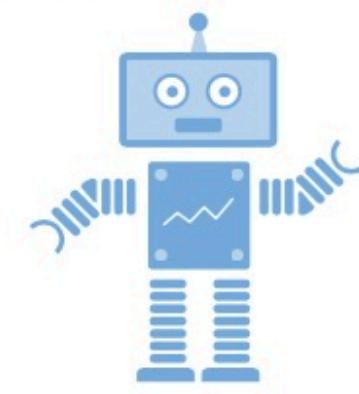
Unlock the tidyverse by learning how to make and use tidy data, the data format designed for R.

Iterate



Master a core programming paradigm with the purrr package: for each ___ do ___.

Write Functions



Functions are the key to programming in R. This primer will teach you how to write and use your own reusable functions.

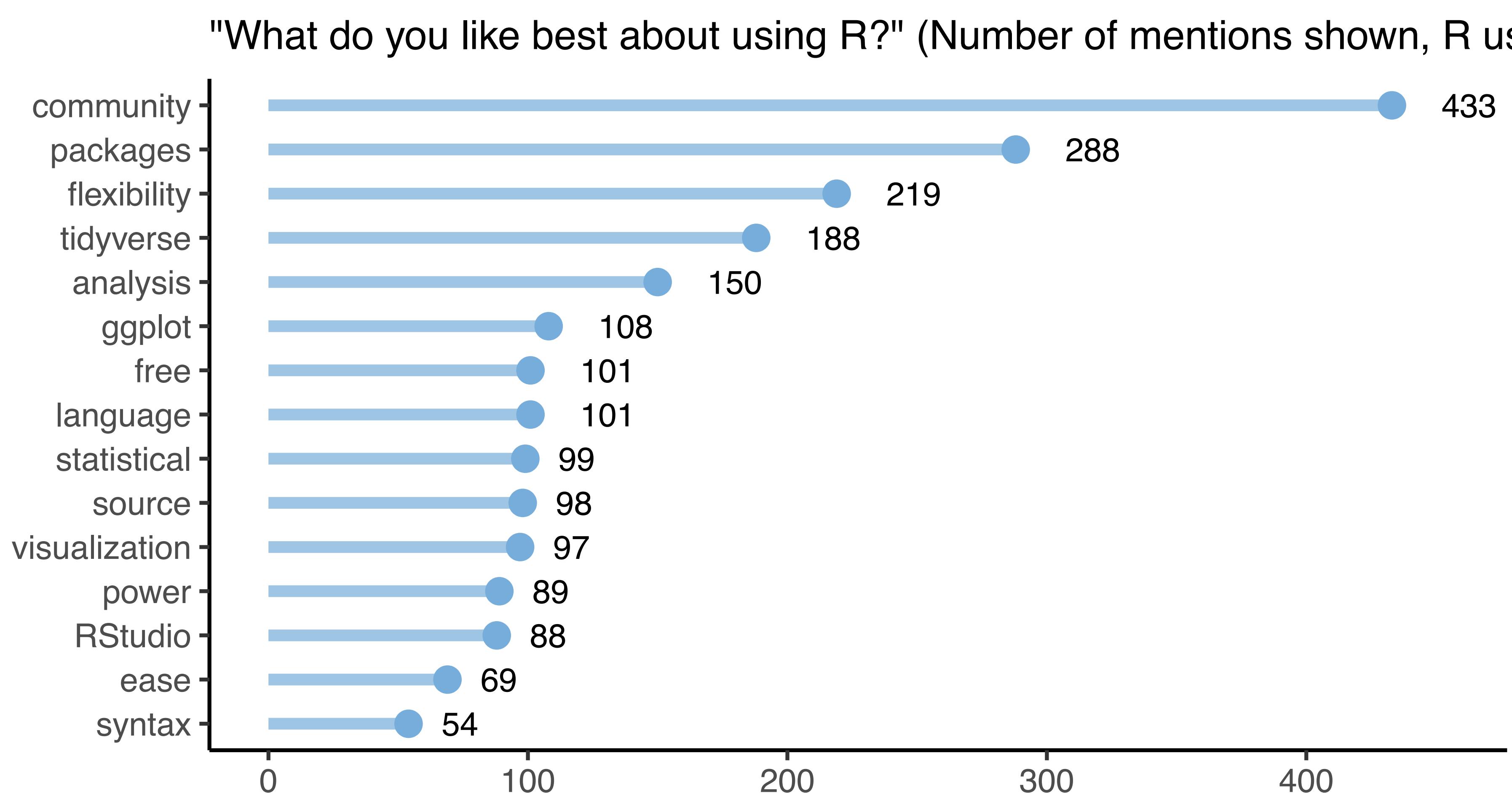
#NextMillionRUsers

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BUT THERE'S ONE MORE THING...

WHAT PEOPLE LIKE BEST ABOUT R IS THE COMMUNITY





15% of R users have no one else
in their work group that knows R!

I CHALLENGE EACH OF YOU
TO TEACH R TO A COLLEAGUE

Train the next million R users

A dark blue-toned photograph of the Austin, Texas skyline at dusk or night. The city lights are visible against a dark sky, with the iconic Frost Bank Tower and other skyscrapers in the background.

Equip everyone, regardless of means,
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