



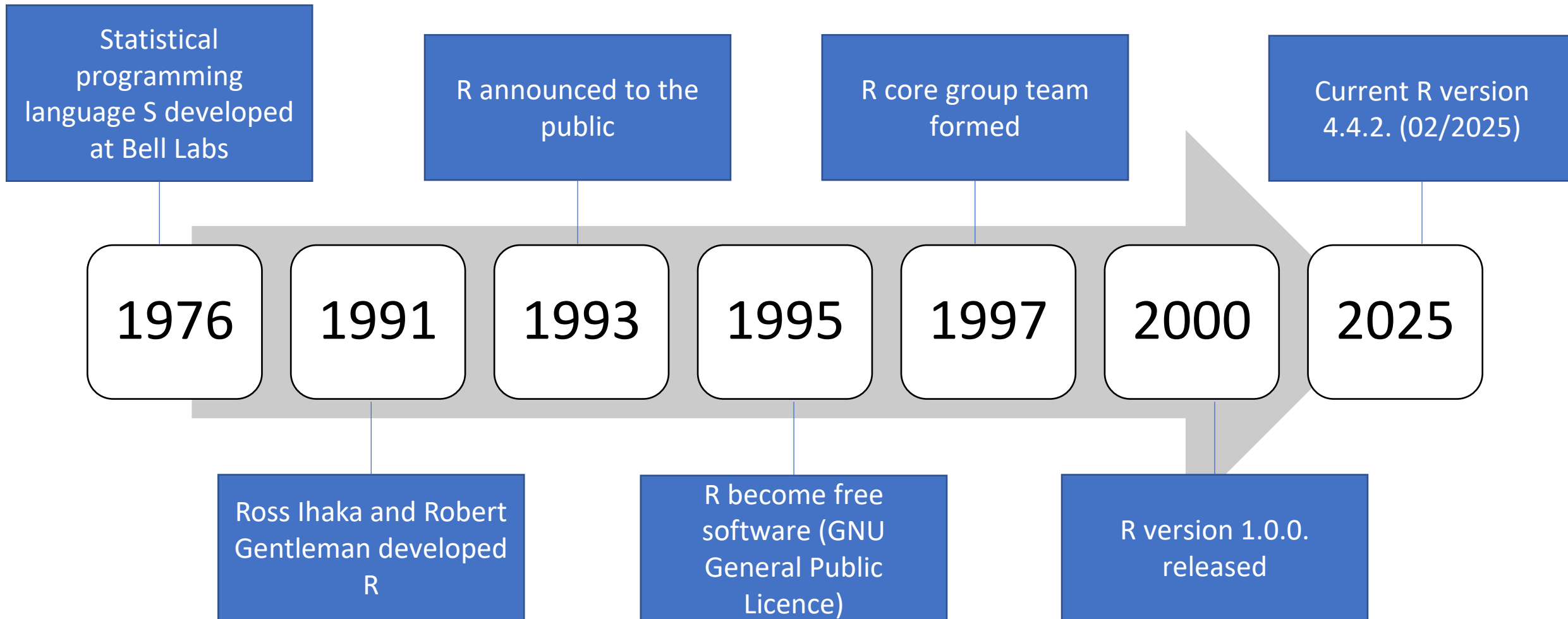
R – a free software environment for statistical computing and graphics

Internal meeting

27th February 2025

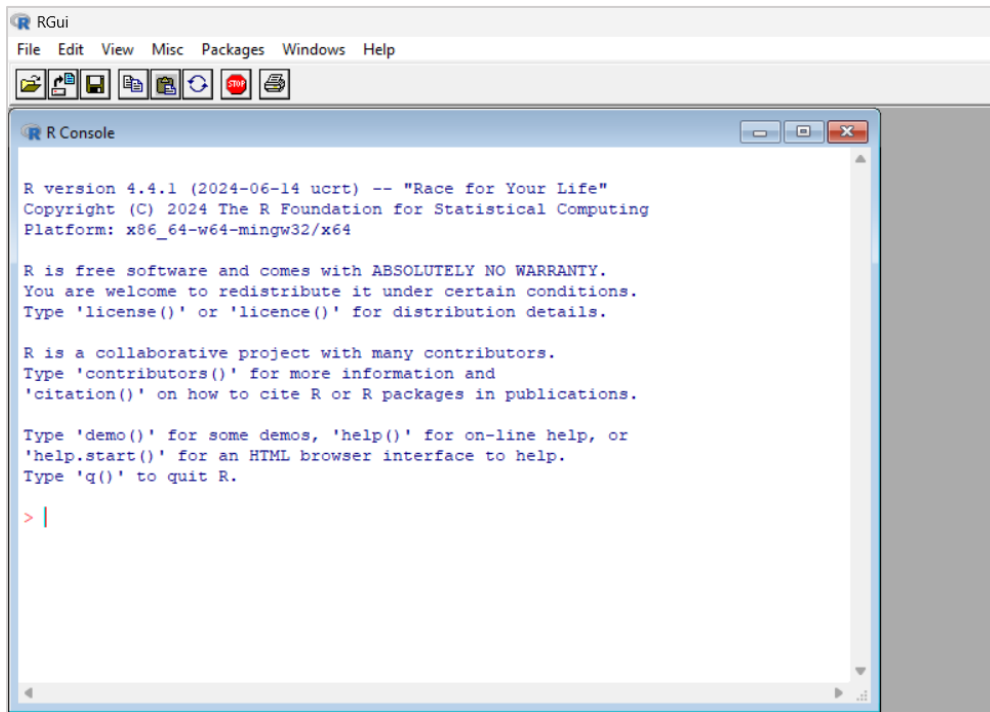
Presented by Sabina Rako

R development timeline

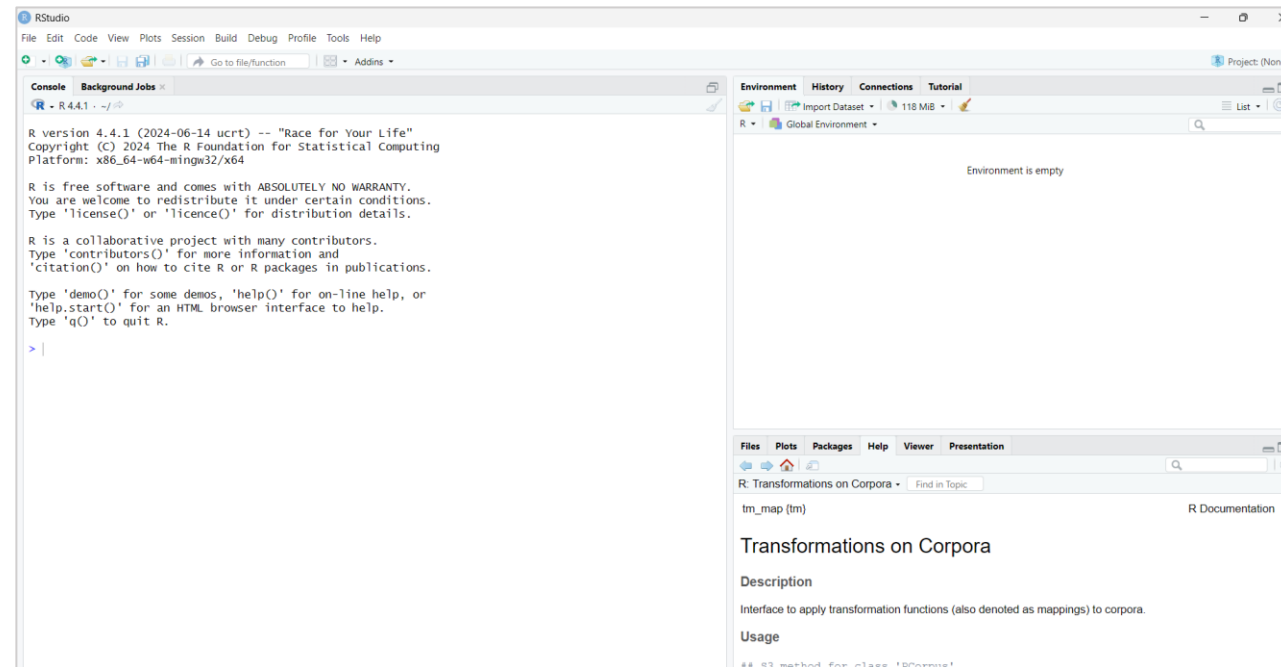


Where to download R?

- R
- <https://cran.r-project.org/>



- RStudio integrated development environment (IDE)
- <https://posit.co/download/rstudio-desktop/>



Different possibilities

- Personal computer (personal use)
- Hosting on institutional infrastructure (open source code)
R Studio Server (<https://posit.co/download/rstudio-server/>)

Download RStudio Server v2024.12.1+563

RStudio Server enables you to run the RStudio IDE you know and love on a Linux server, accessed from your web browser, bringing the power and productivity of the RStudio IDE to a centralized server-based environment.

Select Your Operating System:

[Red Hat](#) [Debian / Ubuntu](#) [SLES / OpenSUSE](#) [Build from source](#)

- R in web browser (developed as a PoC)
<https://webr.r-wasm.org/latest/>

- Cloud – free (25 projects) <https://posit.cloud/>

Friction free data science

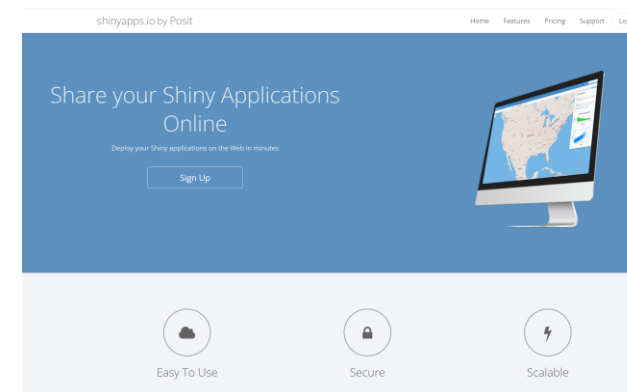
Posit Cloud lets you access Posit's powerful set of data science tools right in your browser – no installation or complex configuration required.

GET STARTED

ALREADY A USER? LOG IN

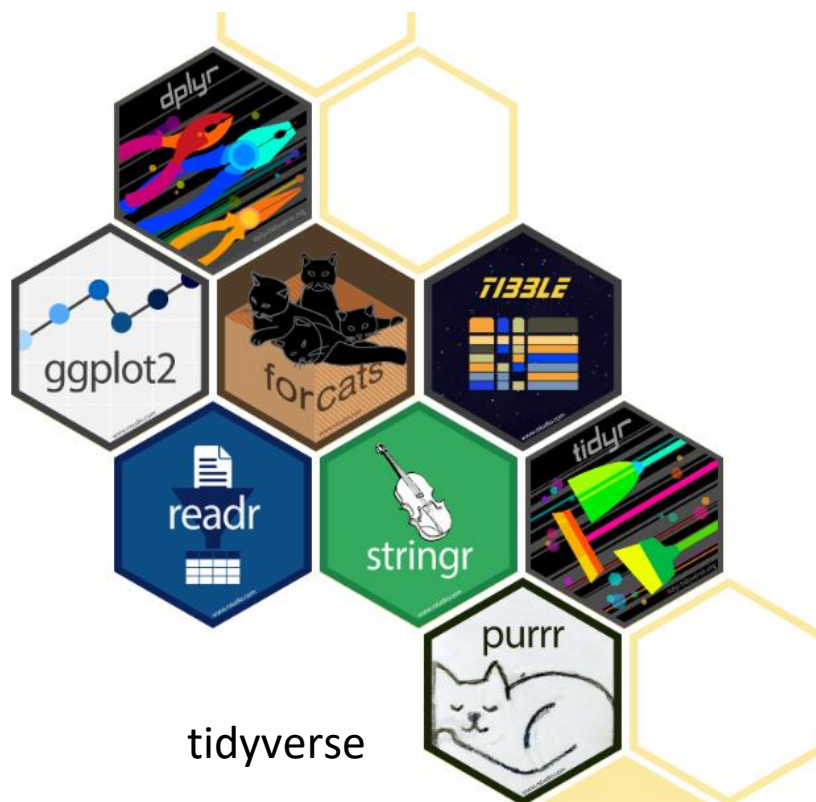
If you already have a shinyapps.io account, you can [log in](#) using your existing credentials.

- Shiny applications <https://www.shinyapps.io/>



Packages are R's superpower!

15
base packages



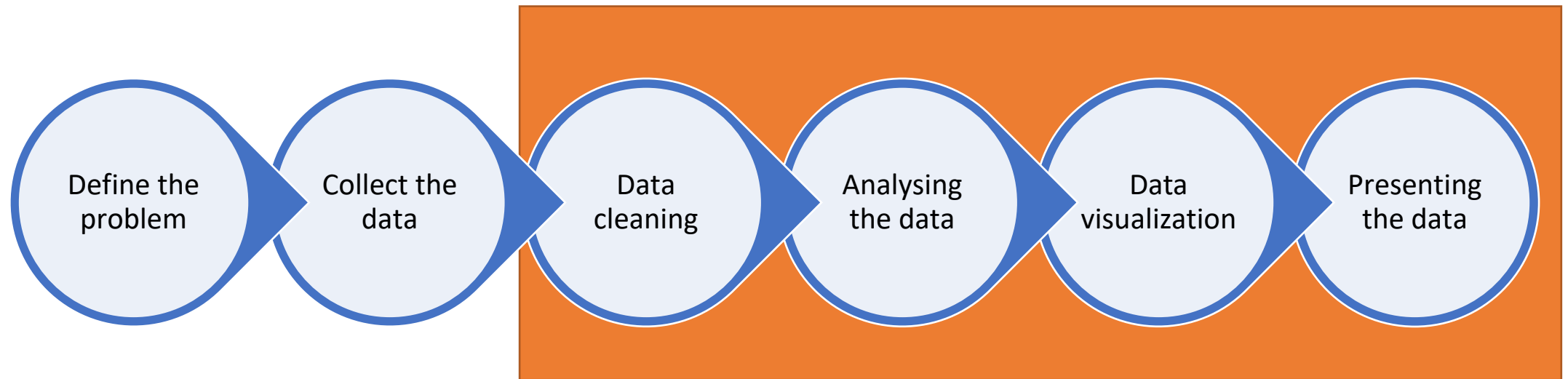
22 097
contributed R packages (02/2025)

<https://cran.r-project.org/web/views/>

Comprehensive R Archive Network (CRAN) is network of servers around the world that store R distributions, extensions, documentation, and binaries

Other repositories of R packages: **Bioconductor** and **R-Forge**

Data analysis process

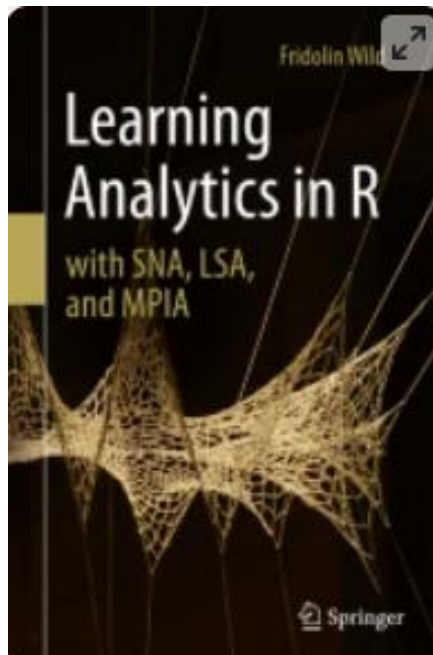


Examples

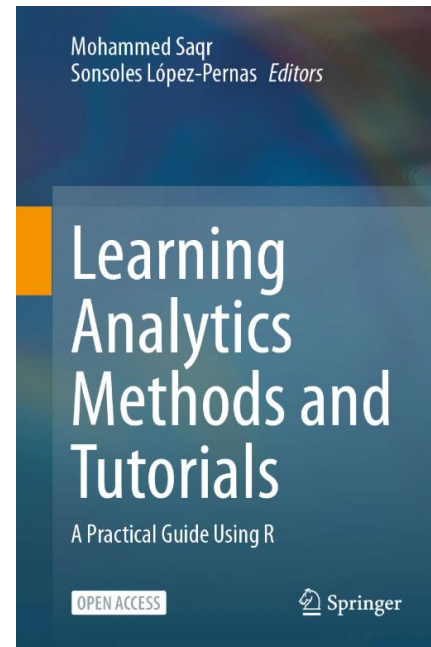
- **Example 1: Stacked bar diagram**
- Example 2: Extinct plants
- Example 3: Beyonce and Taylor Swift Lyrics

GitHub: https://github.com/SabinaRa/IET_2025

LA community and R



2016



2024

Open access book
[Download link](#)

Written in a tutorial-style
Include reproducible examples and demos

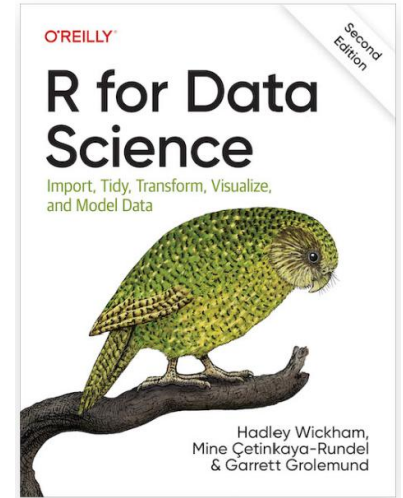
R Studio and GitHub Copilot

- Suggestions during programming in R (or AI)
“AI pair programmer that offers autocomplete-style suggestions as you code”
<https://docs.posit.co/ide/user/ide/guide/tools/copilot.html>

It can be useful for writing repetitive code (loops, etc.)

Resources and R community

- Free books to start learning R
- Available code on programming code repositories (Git,...)
- Tidy Tuesday <https://www.tidyuesday.com/>
- The R graph gallery <https://r-graph-gallery.com/>
- The RStats Running Club <https://strava.app.link/VmVYvudjfRb>



<https://r4ds.hadley.nz/>



<https://posit.co/blog/winners-of-the-2024-shiny-contest/>

Code available on Git repositories



My journey with R

2015

First f2f course:
Introduction to R

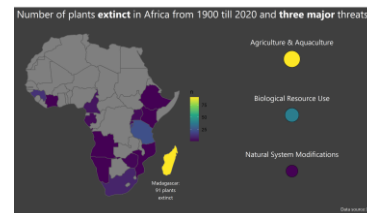
2017 - 2020

Involvement in
development of
several R online
and f2f courses

2022

Data analysis in PhD thesis

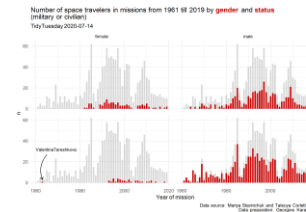
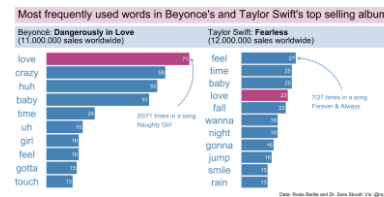
2020 Tidy Tuesday



e-Rum 2020 conference



<https://sabinar.shinyapps.io/CoDaP/>



<https://github.com/SabinaRa/>

2021

HELA project (Improving HEI
maturity to implement
learning analytics)

- Natural language processing

Takeaways

- R is used in the LA community.
- Although learning R takes time, many resources are available.
- Suggestions
 - Start with R's core functions and data structures before exploring specific packages.
 - Focus on one skill at a time and practice it (e.g., loading data from different file formats).
 - Look at code prepared by experienced researchers and practitioners.

Thank you!

Q & A

If you want to try R online

...without installing it on your computer

1. <https://login.posit.cloud/> - login in with Google

A screenshot of the Posit Cloud login page. At the top, there are links for 'Log In' and 'Don't have an account? Sign Up'. Below this is an email input field with a placeholder 'Email', a 'Continue' button, and a link for 'Forgot your password?'. Underneath, it says 'or' and then lists three login options: 'Log in with Google' (with the Google logo), 'Log in with GitHub' (with the GitHub logo), and 'Log in with Clever' (with the Clever logo).

2. Select **Posit Cloud**

A screenshot of the Posit Cloud destination selection page. It says 'You are logged in to Posit. Please select your destination.' and lists four options: 'Posit Connect Cloud', 'Posit Cloud', 'shinyapps.io', and 'Posit User Settings'. Below these options, it says 'or' and has a 'Log Out' button.

3. Select **New Project** -> New Project from Git Repository
https://github.com/SabinaRa/IET_2025

A screenshot of the 'New Project' dropdown menu. The menu is open, showing several options: 'New Project from Template' (with a plus icon), 'New RStudio Project' (with the R logo), 'New Jupyter Project' (with the Jupyter logo), and 'New Project from Git Repository' (with the GitHub logo). The 'New Project' button is at the top right of the menu.