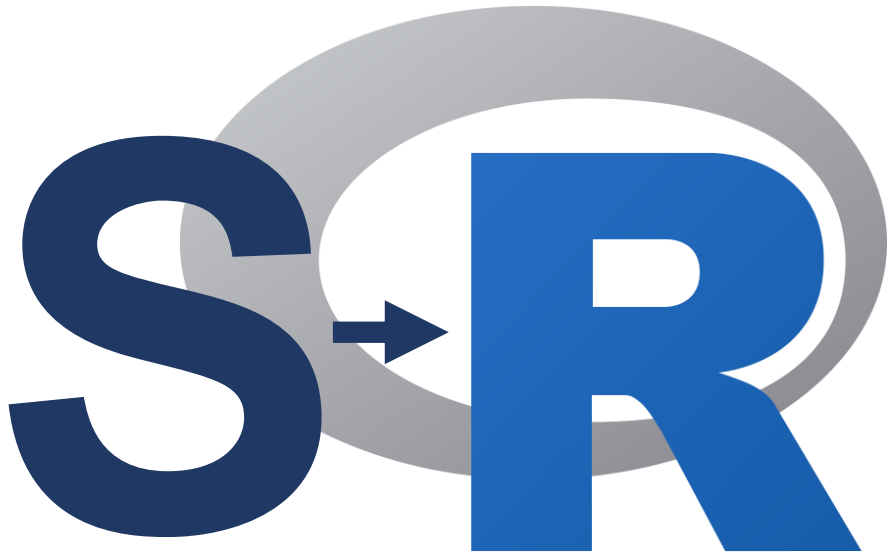# Short intro to R

What is R?

Free programming language for statistical computing and graphics

History of R

- R is a modern and free implementation of S
- Named from the creators (Ross Ihaka and Robert Gentleman)

Features of R

- Has the most comprehensive statistical analysis package which is open-source

- Has the best graphics output (i.e., plotting tools)

- Has very good community support

Limitations of R

- Poor memory management, slow and not efficient
- Some packages are neither published nor tested

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R language run

Demo

Objects, class and variables

- Object - everything in R is called an object
- Class - blueprint of the object
- Variable - a container for any object

RStudio
Parts

Source

This is where you write your code.

Environment, history

What are your objects? What are the codes that you ran?

Console

This is where your code gets evaluated.

Files, plots, etc.

An interface that lets you visualize many things.

RStudio run

Demo

Quarto
Reproducible codes = reproducible Science!

Next-gen version of RMarkdown

🤔 What's RMarkdown, though?

A Data Science authoring tool that lets you combine your code, its results and your comments/instructions

Quarto
Sans Markdown tool vs Quarto

Before 🤮

Making a function

Annotation

Make a function that takes any number and turns it to its squared form.

Code chunk

Make a sample run of your function.

After 💖

Do Stats in a reproducible way!

Demo