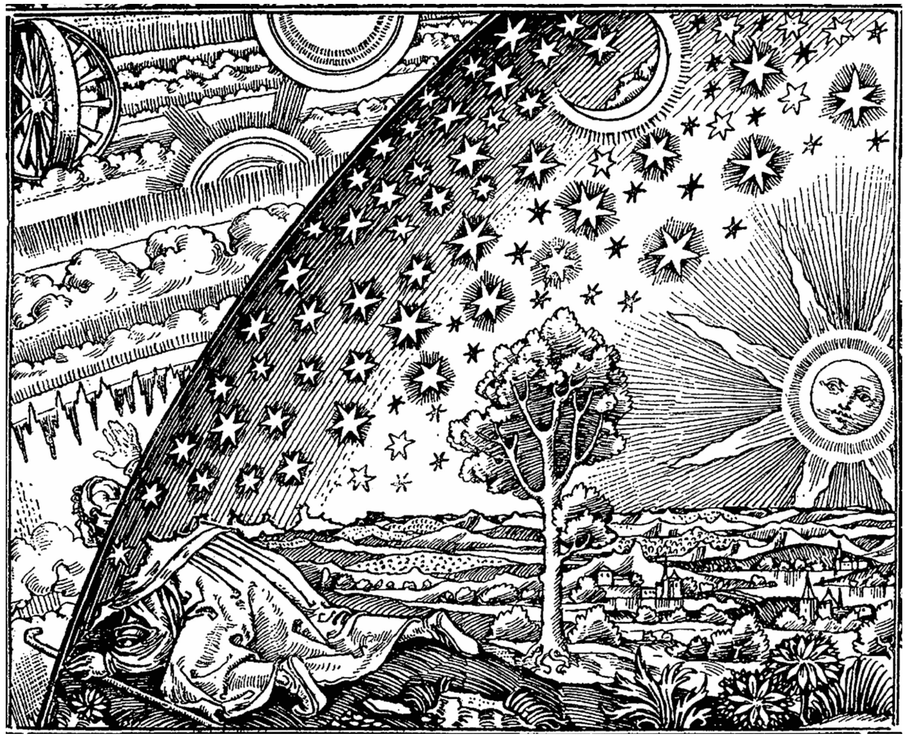
Master the Tidyverse



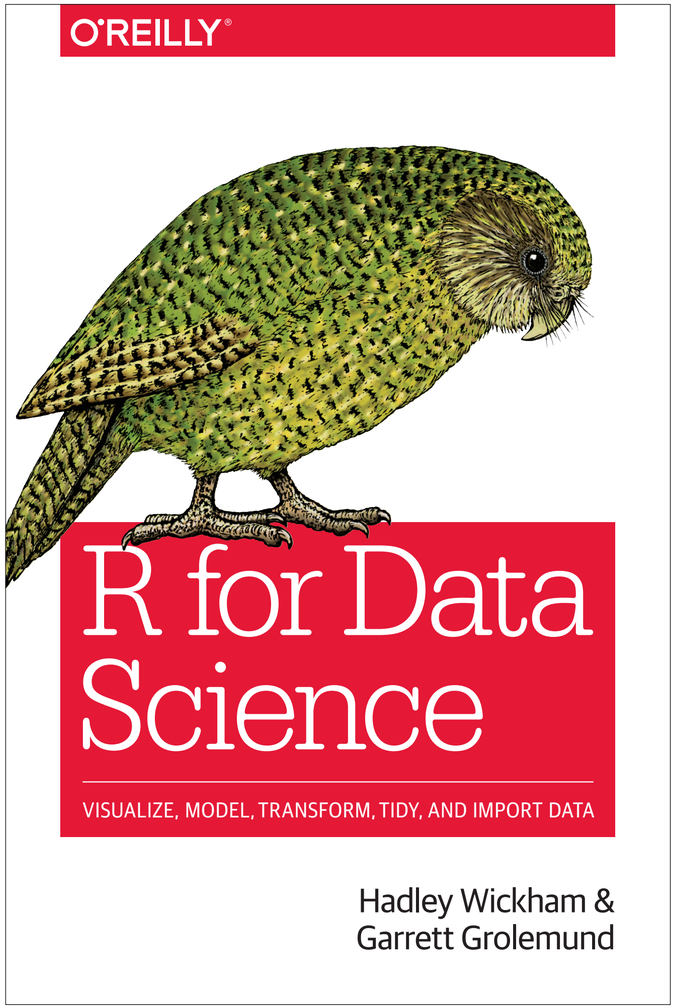
Garrett Grolemund

Data Scientist, Educator

January 2017

RStudio

@StatGarrett

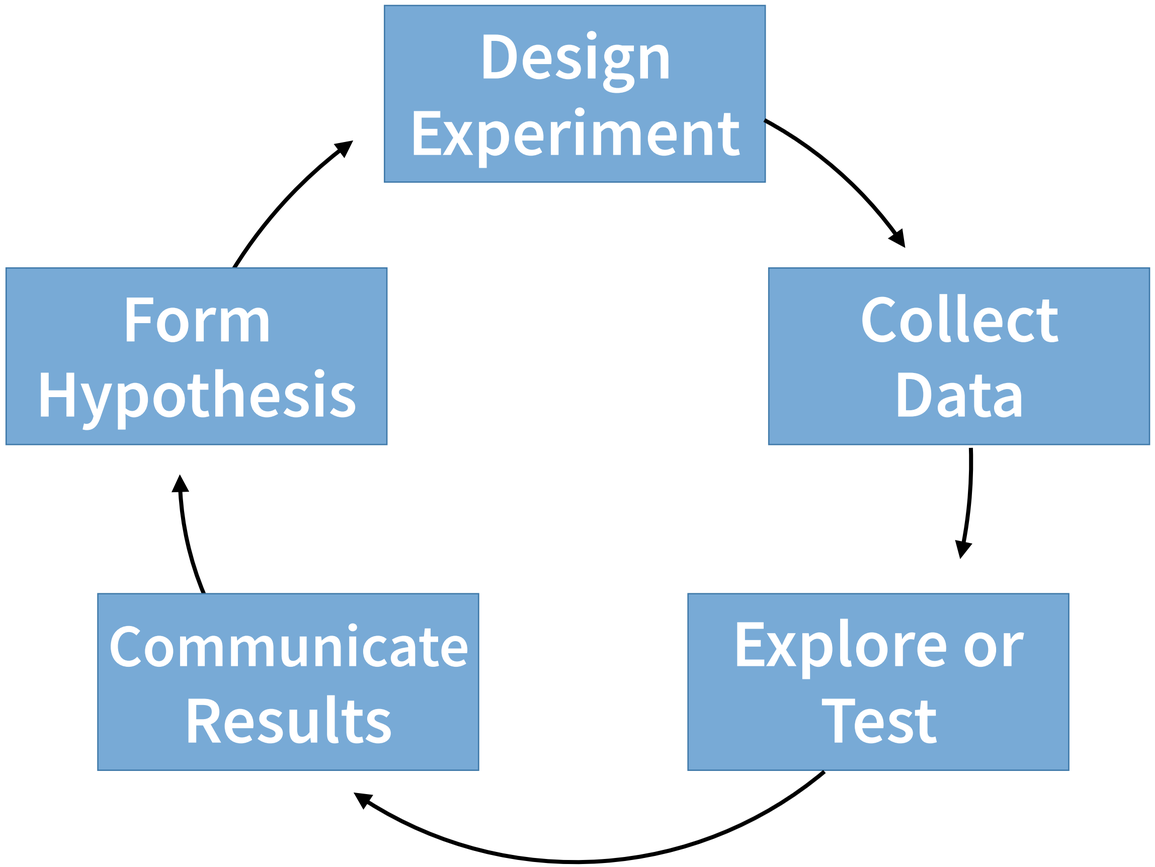


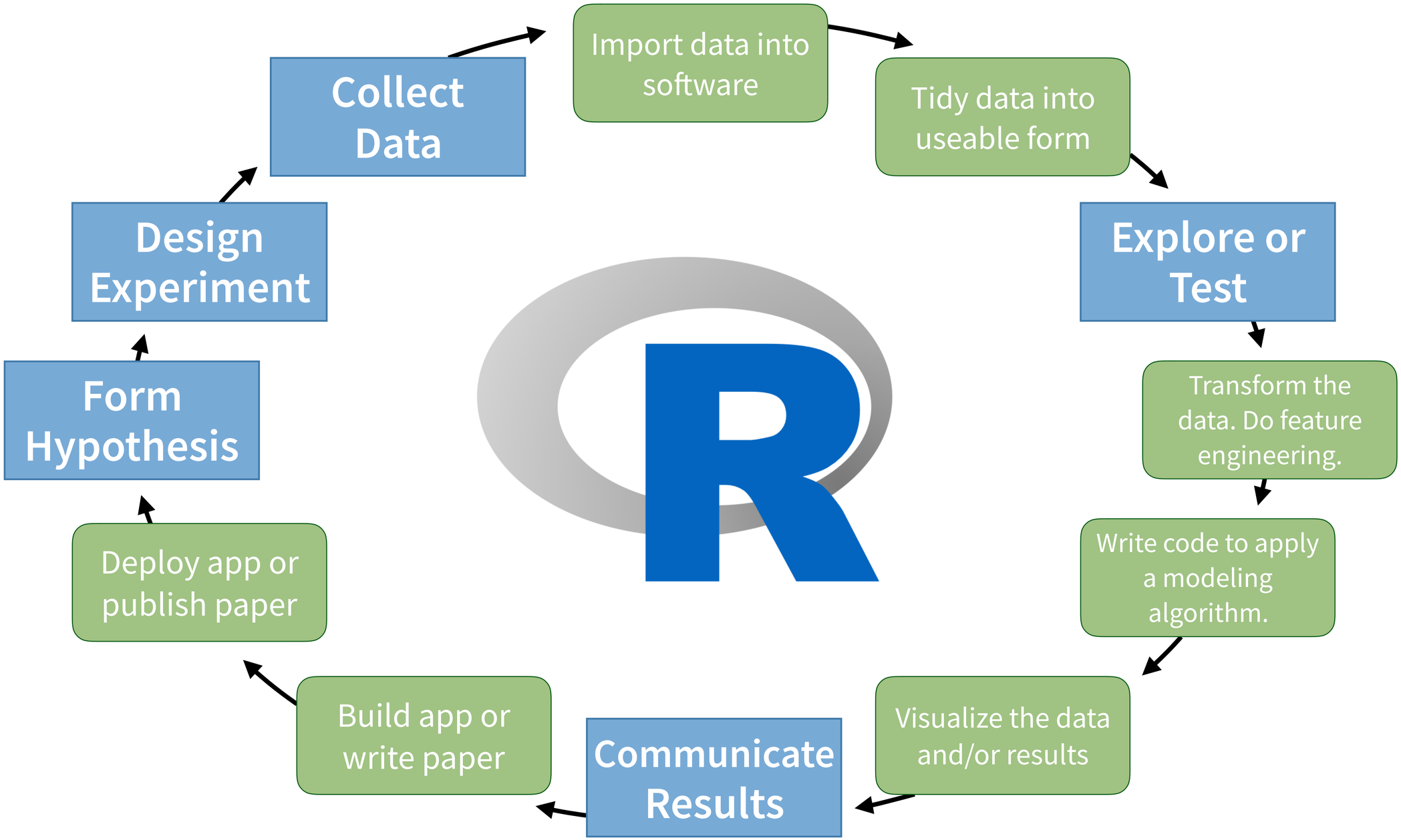
Your Turn

Form groups of 2-4 people. Introduce yourself to your group members. Tell them:

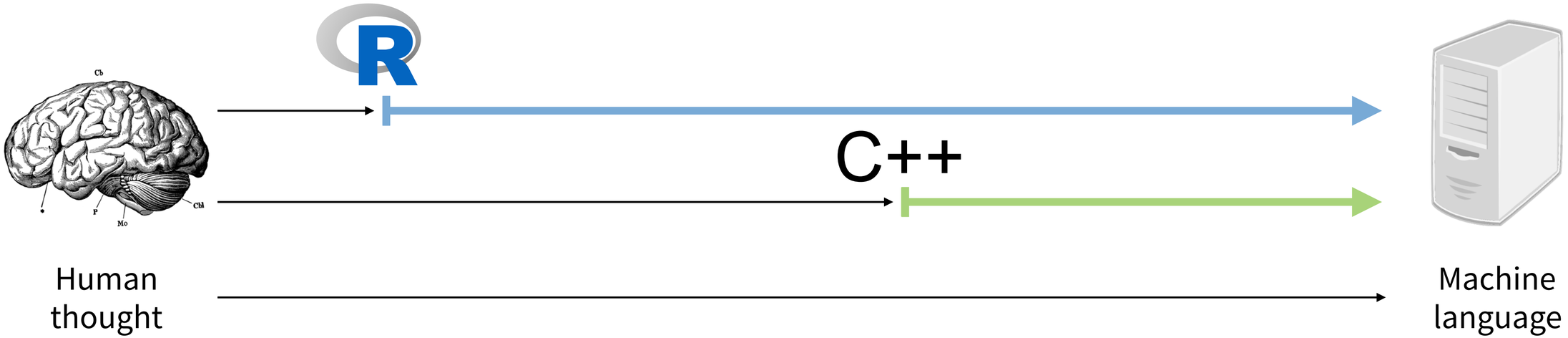
1. Who you are
2. What you do with data
3. How long you have been using R

"Data Science"

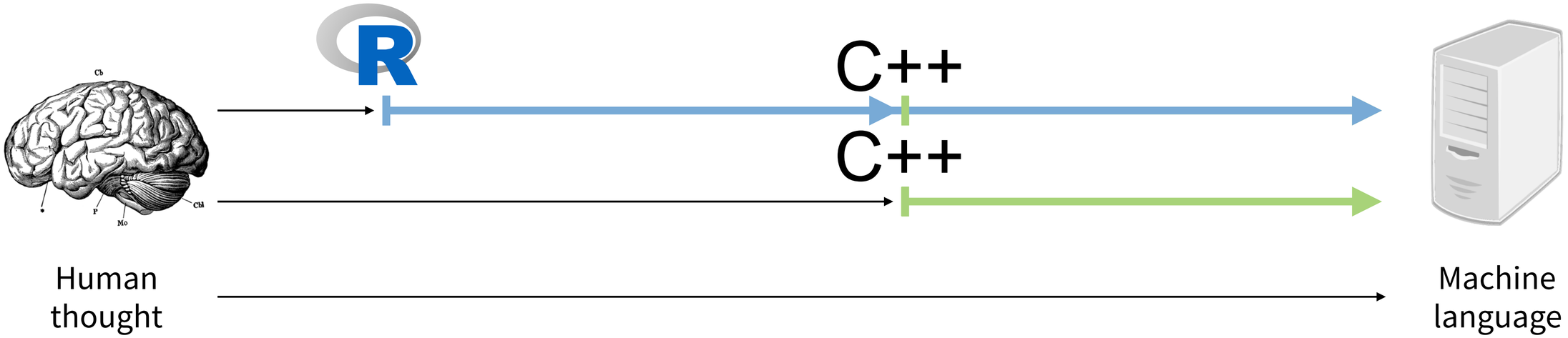




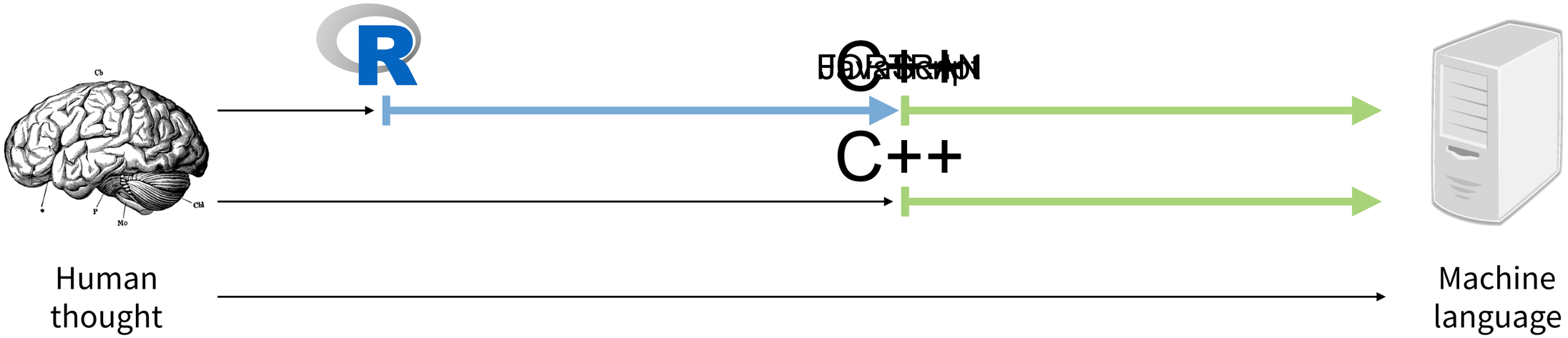
R - A computer language for scientists



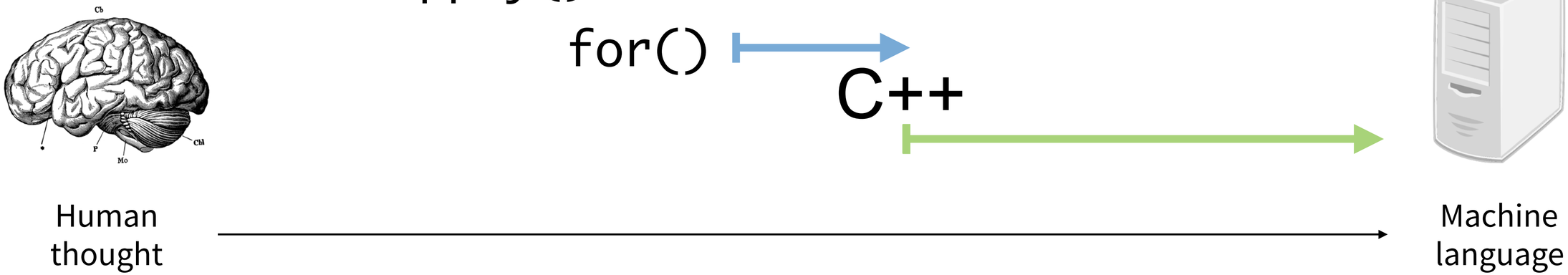
R - A computer language for scientists

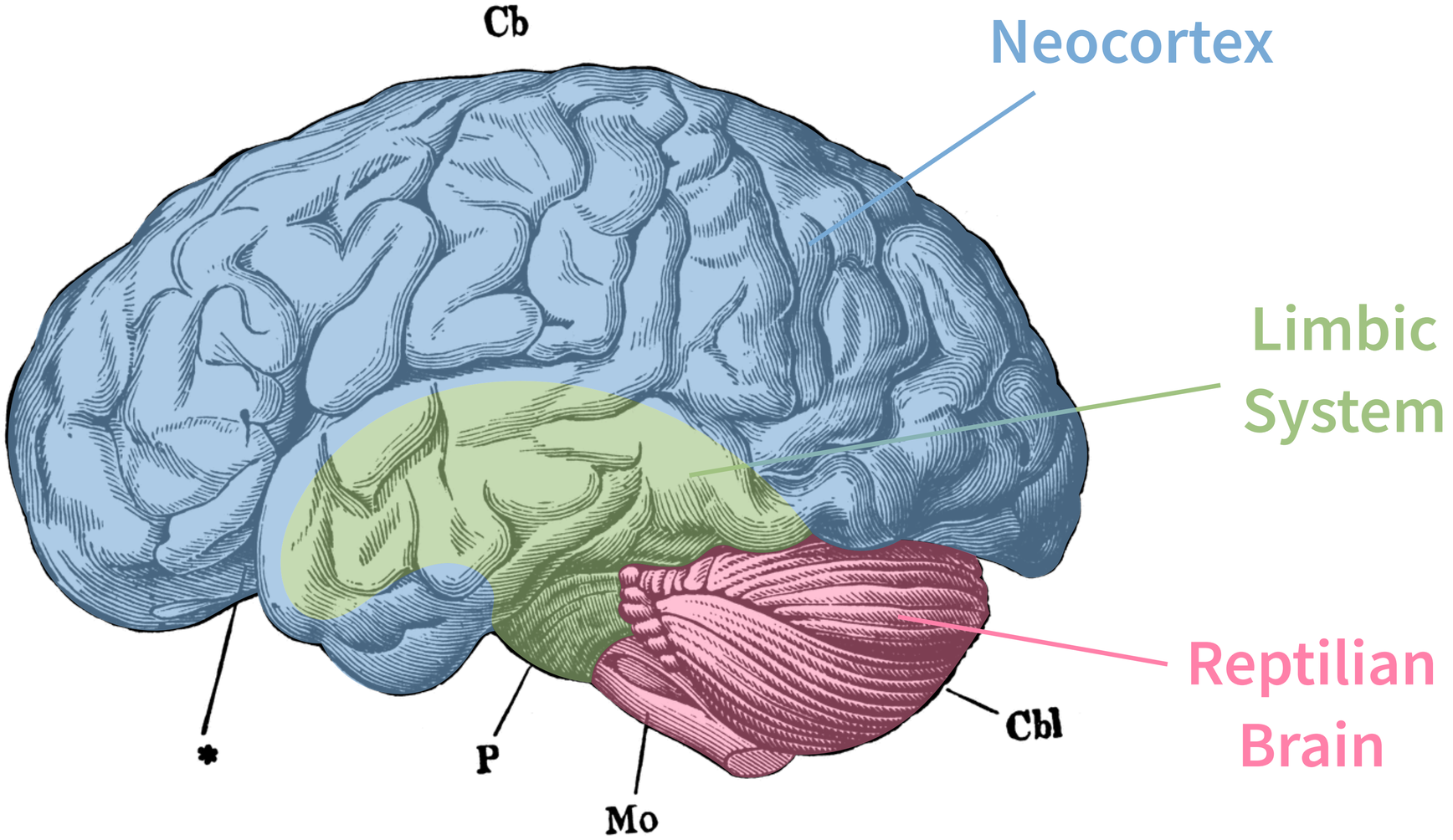


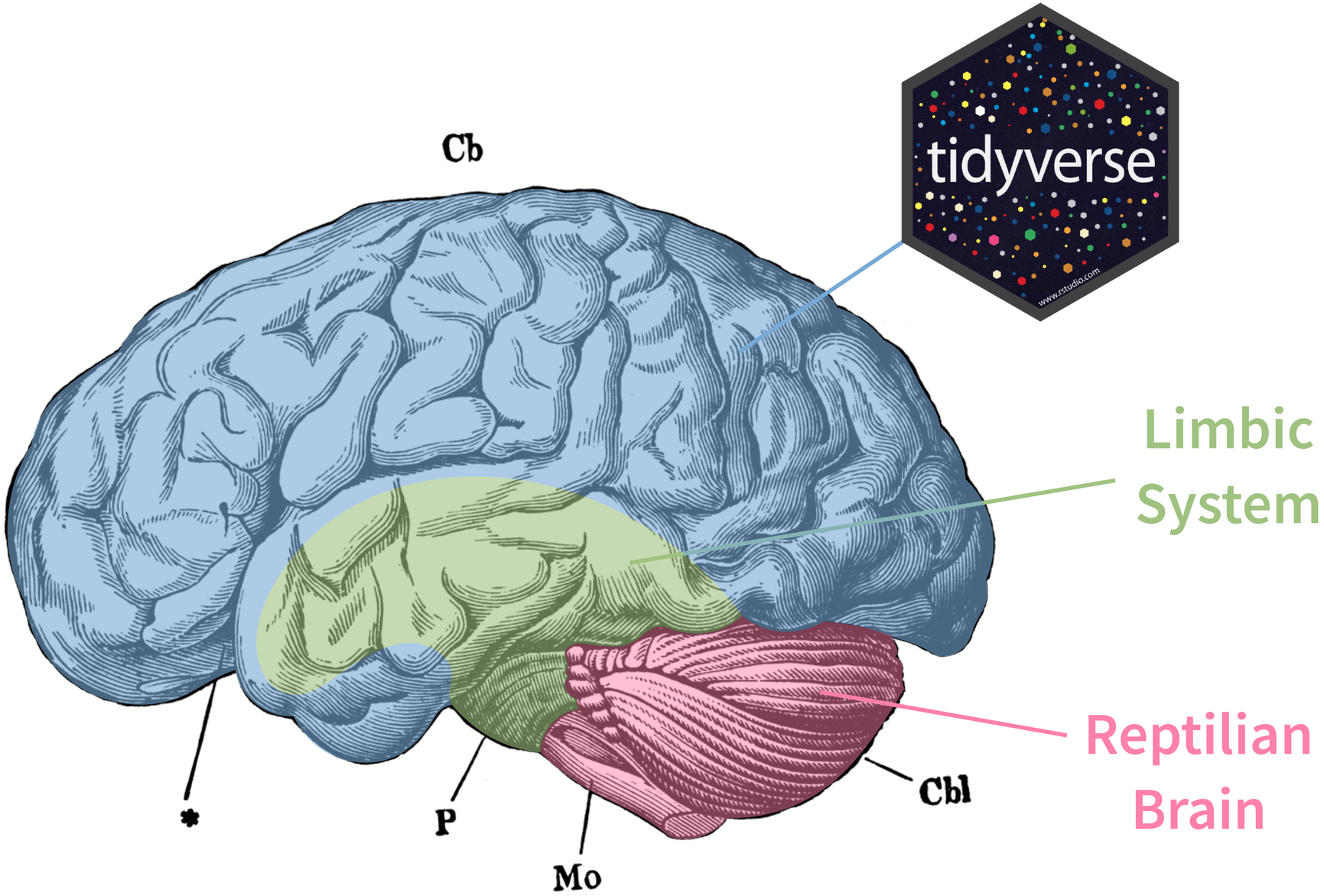
R - A computer language for scientists



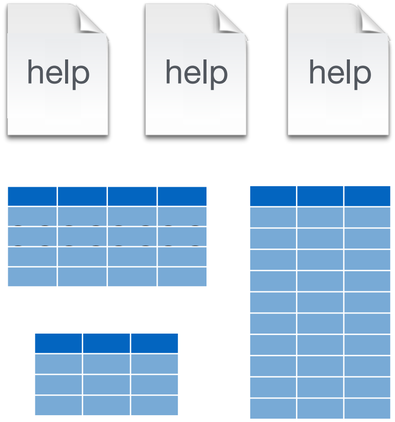
R - A computer language for scientists



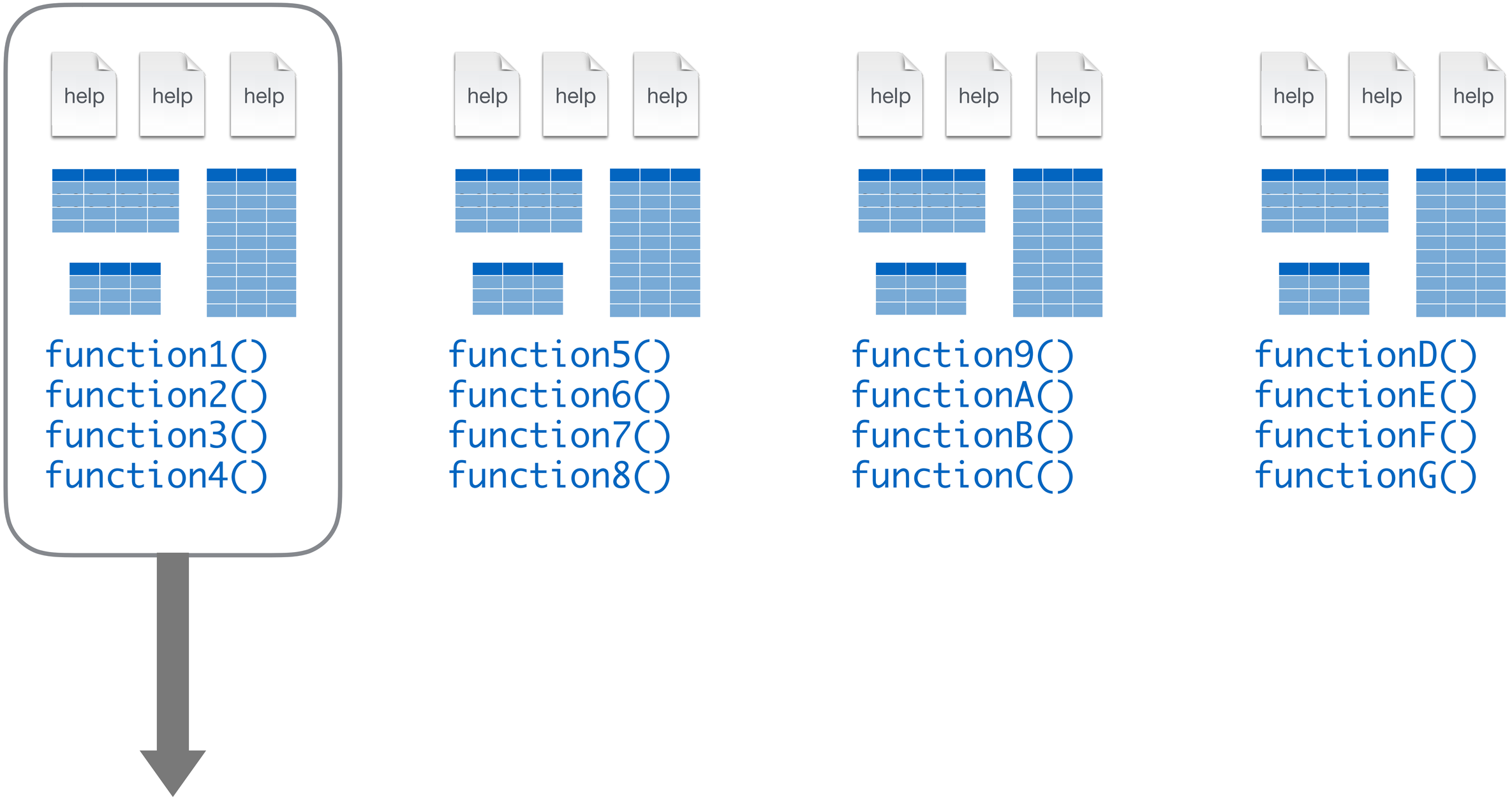




R Packages




```
function1()
function2()
function3()
function4()
```


help
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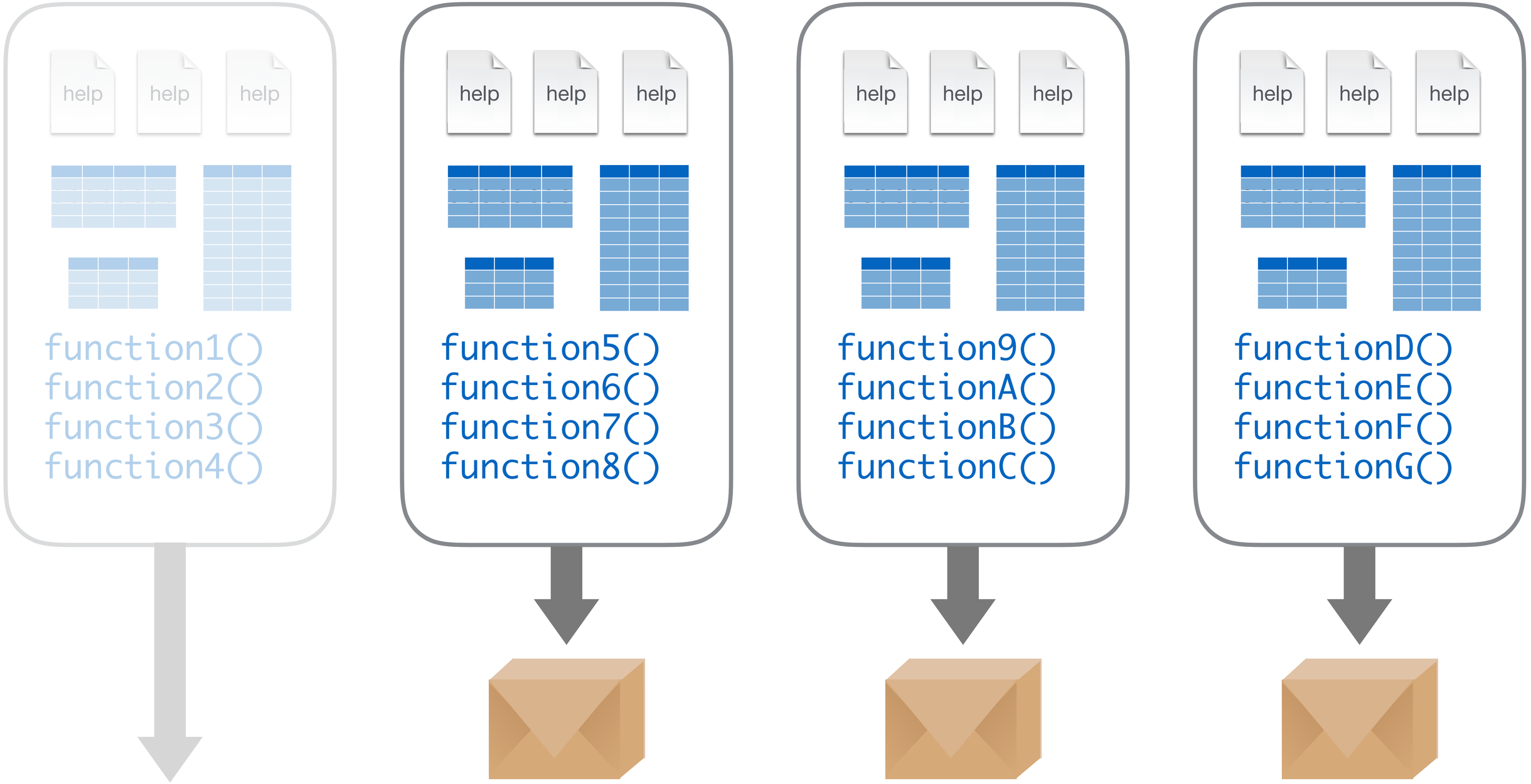
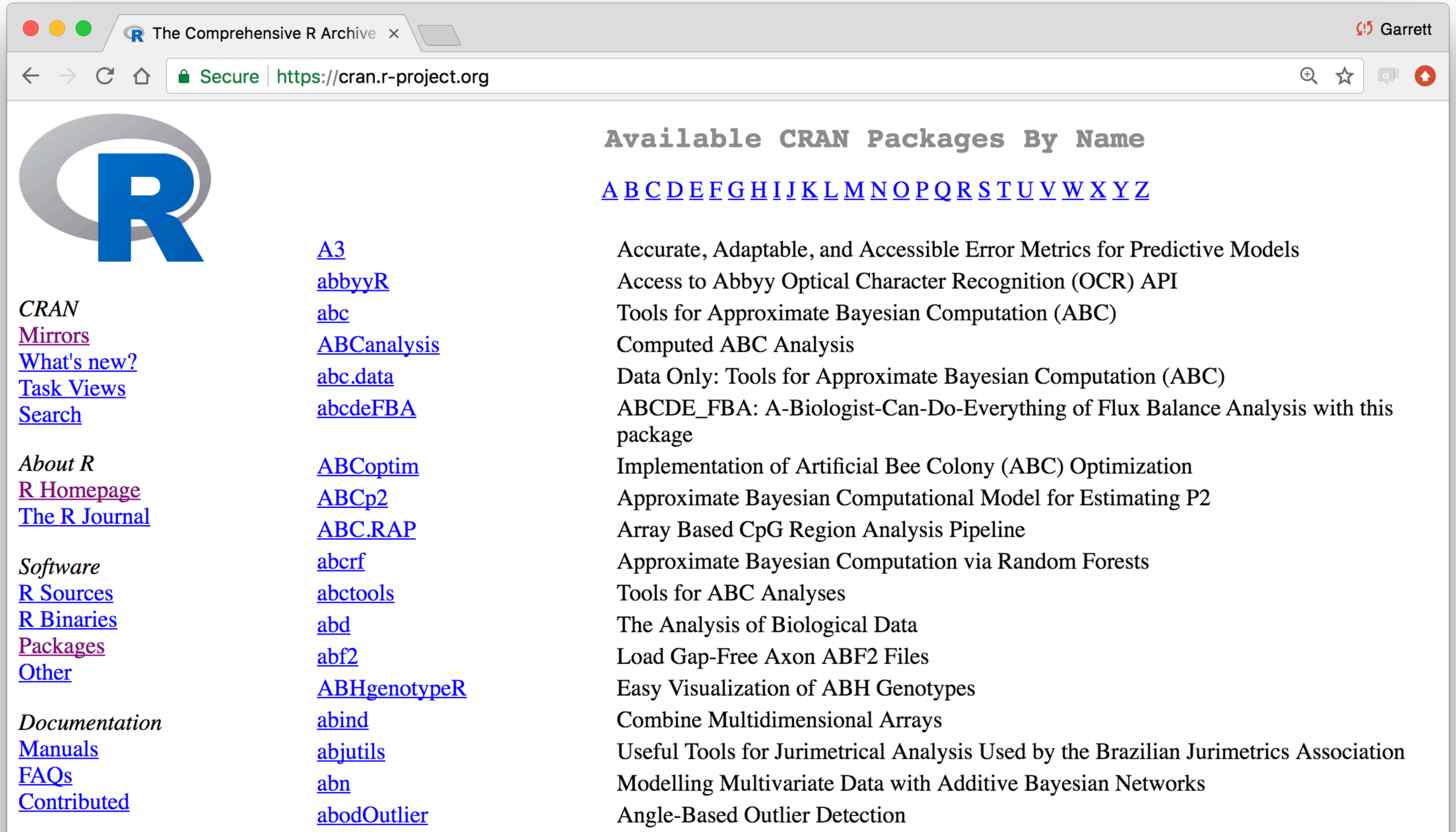
function1()
function2()
function3()
function4()
function5()
function6()
function7()
function8()
function9()
functionA()
functionB()
functionC()
functionD()
functionE()
functionF()
functionG()

Base R



Base R

R Packages



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The R Journal

Software
R Sources
R Binaries
Packages
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Documentation
Manuals
FAQs
Contributed

Available CRAN Packages By Name

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

A3	Accurate, Adaptable, and Accessible Error Metrics for Predictive Models
abbyyR	Access to Abbyy Optical Character Recognition (OCR) API
abc	Tools for Approximate Bayesian Computation (ABC)
ABCanalysis	Computed ABC Analysis
abc.data	Data Only: Tools for Approximate Bayesian Computation (ABC)
abcdeFBA	ABCDE_FBA: A-Biologist-Can-Do-Everything of Flux Balance Analysis with this package
ABCoptim	Implementation of Artificial Bee Colony (ABC) Optimization
ABCp2	Approximate Bayesian Computational Model for Estimating P2
ABC.RAP	Array Based CpG Region Analysis Pipeline
abcrf	Approximate Bayesian Computation via Random Forests
abctools	Tools for ABC Analyses
abd	The Analysis of Biological Data
abf2	Load Gap-Free Axon ABF2 Files
ABHgenotypeR	Easy Visualization of ABH Genotypes
abind	Combine Multidimensional Arrays
abjutils	Useful Tools for Jurimetrical Analysis Used by the Brazilian Jurimetrics Association
abn	Modelling Multivariate Data with Additive Bayesian Networks
abodOutlier	Angle-Based Outlier Detection

Using packages

1

```
install.packages("foo")
```

Downloads files to computer

1 x per computer

2

```
library("foo")
```

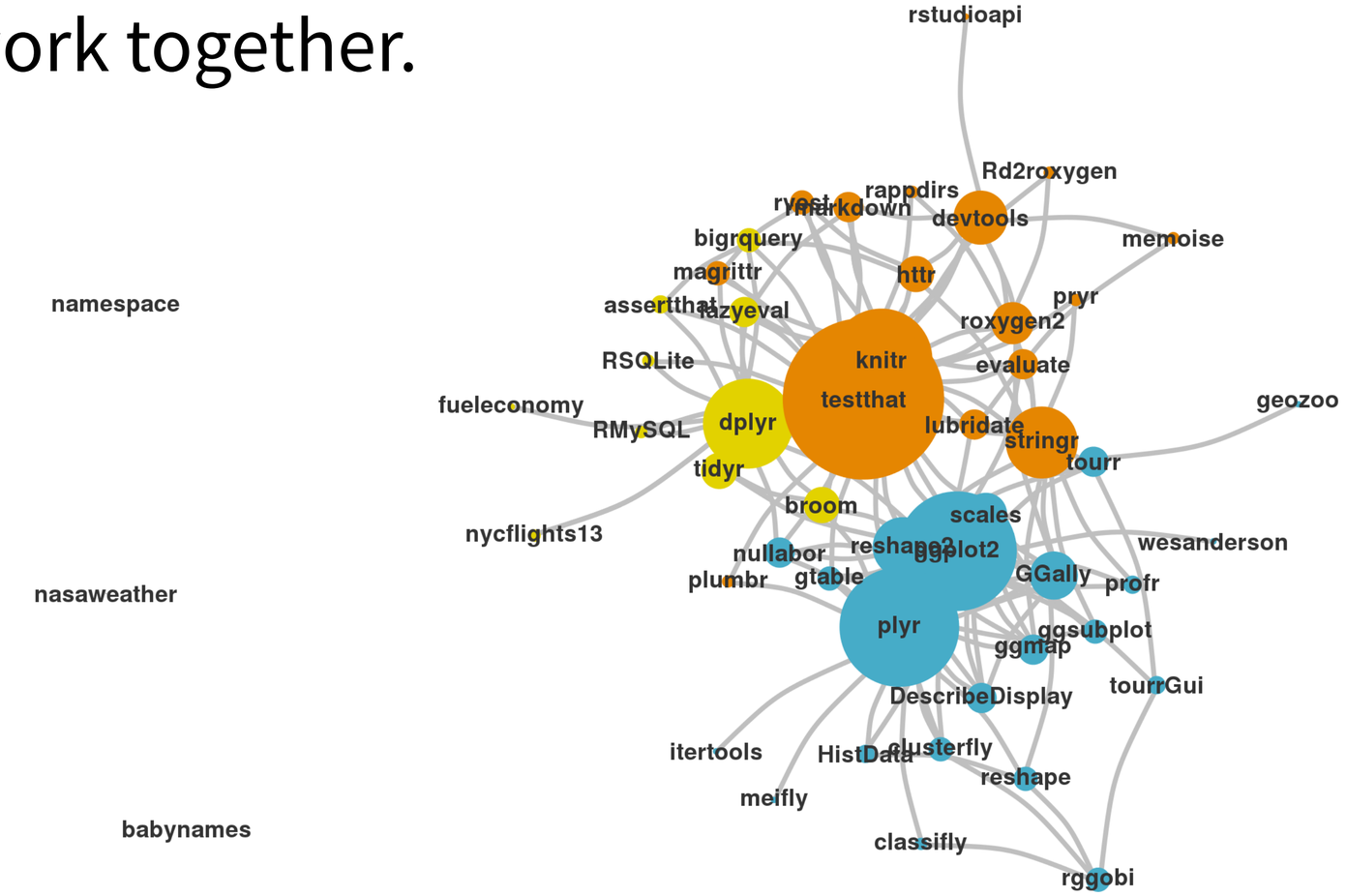
Loads package

1 x per R Session

The Tidyverse

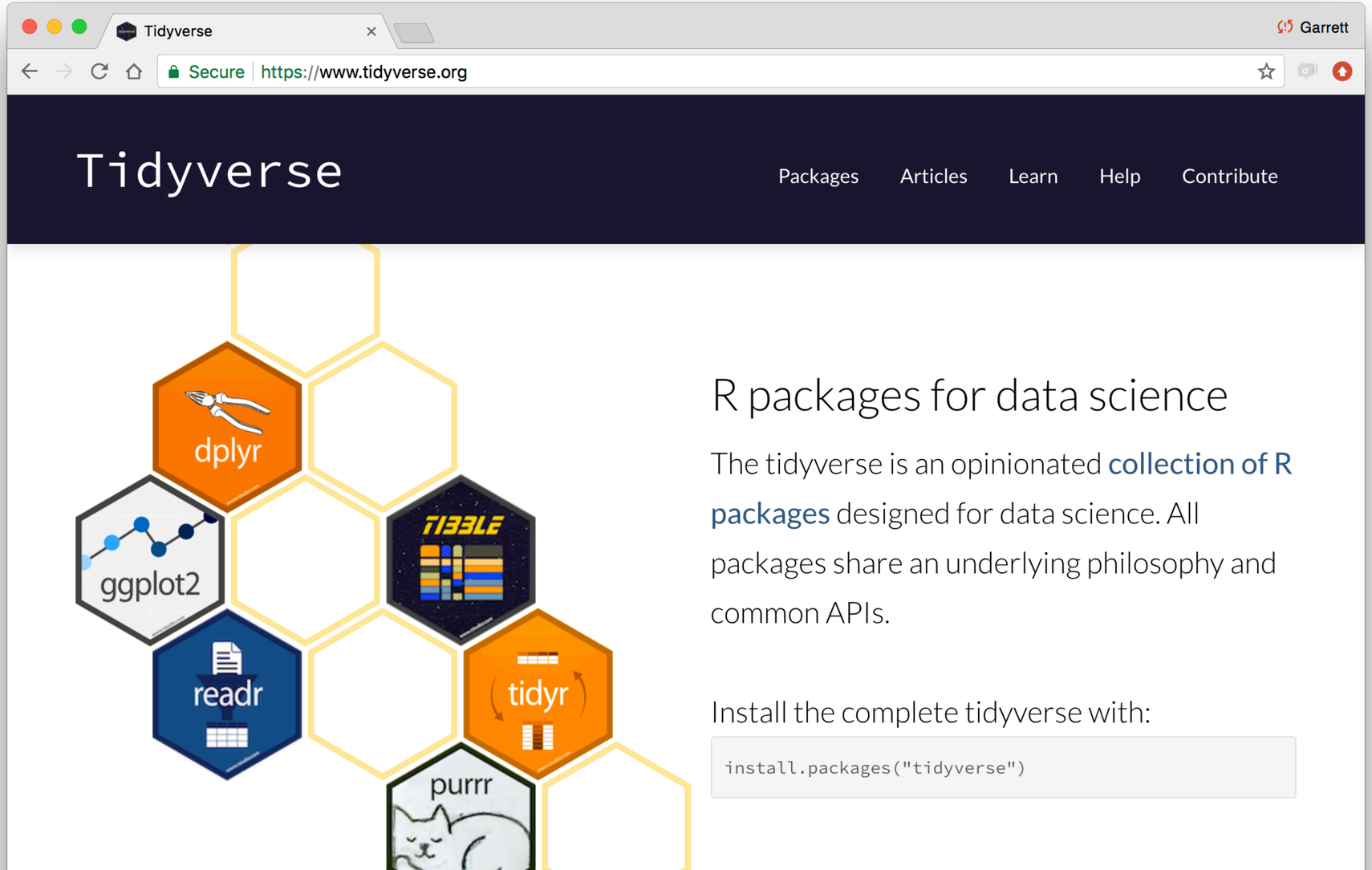
The Tidyverse

A collection of modern R packages that share common philosophies, embed best practices, and are designed to work together.

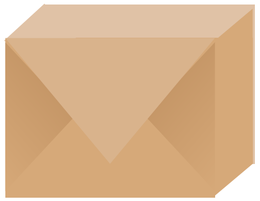


Display by Adolfo Álvarez

tidyverse.org



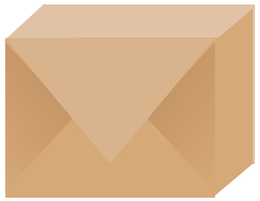
tidyverse



An R package that serves as a short cut for installing and loading the components of the tidyverse.

```
library("tidyverse")
```

tidyverse



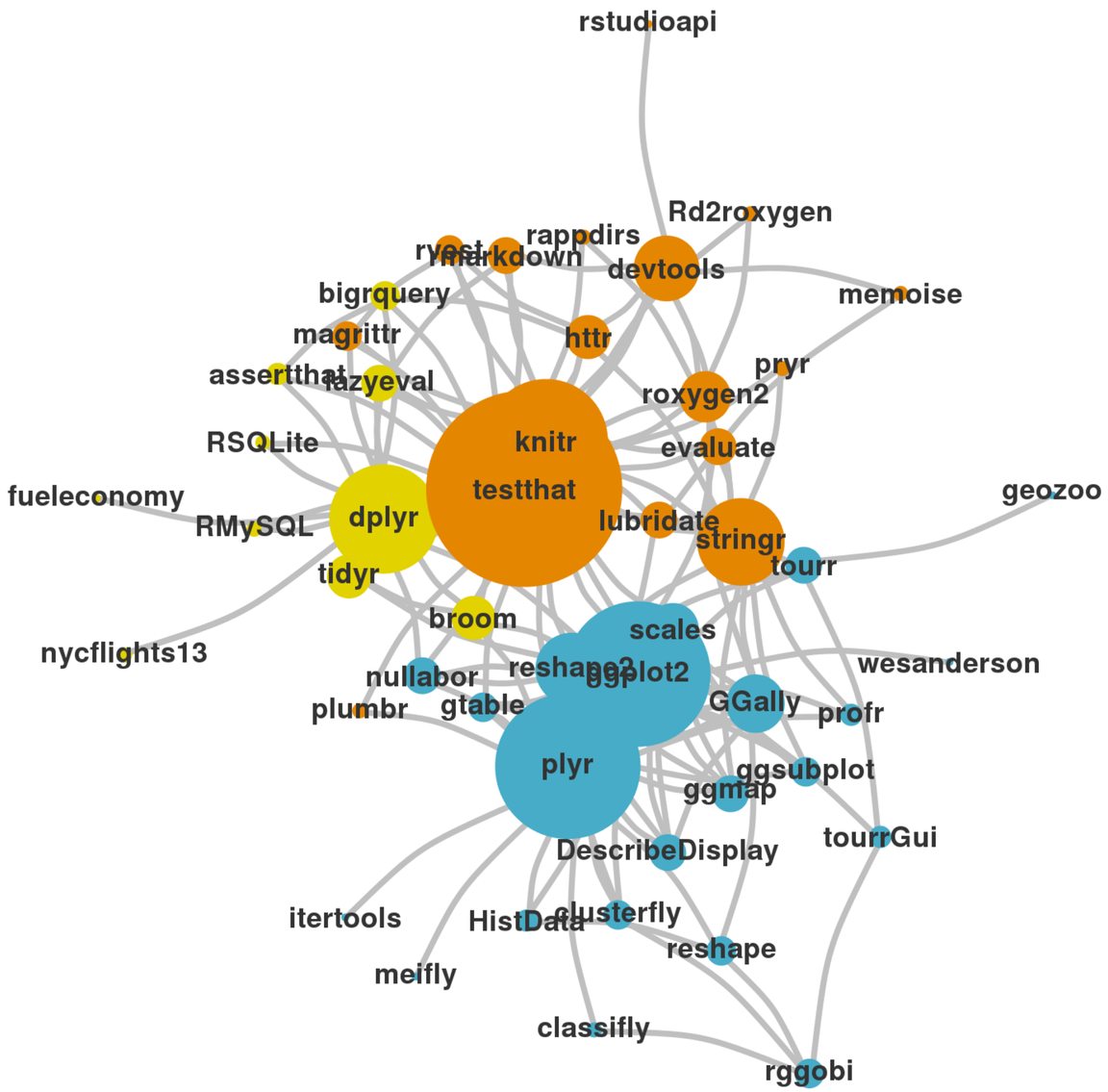
An R package that serves as a short cut for installing and loading the components of the tidyverse.

```
library("tidyverse")
```

```
install.packages("tidyverse")
```

does the equivalent of

```
install.packages("ggplot2")
install.packages("dplyr")
install.packages("tidyr")
install.packages("readr")
install.packages("purrr")
install.packages("tibble")
install.packages("hms")
install.packages("stringr")
install.packages("lubridate")
install.packages("forcats")
install.packages("DBI")
install.packages("haven")
install.packages("httr")
install.packages("jsonlite")
install.packages("readxl")
install.packages("rvest")
install.packages("xml2")
install.packages("modelr")
install.packages("broom")
```



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library("tibble")
```

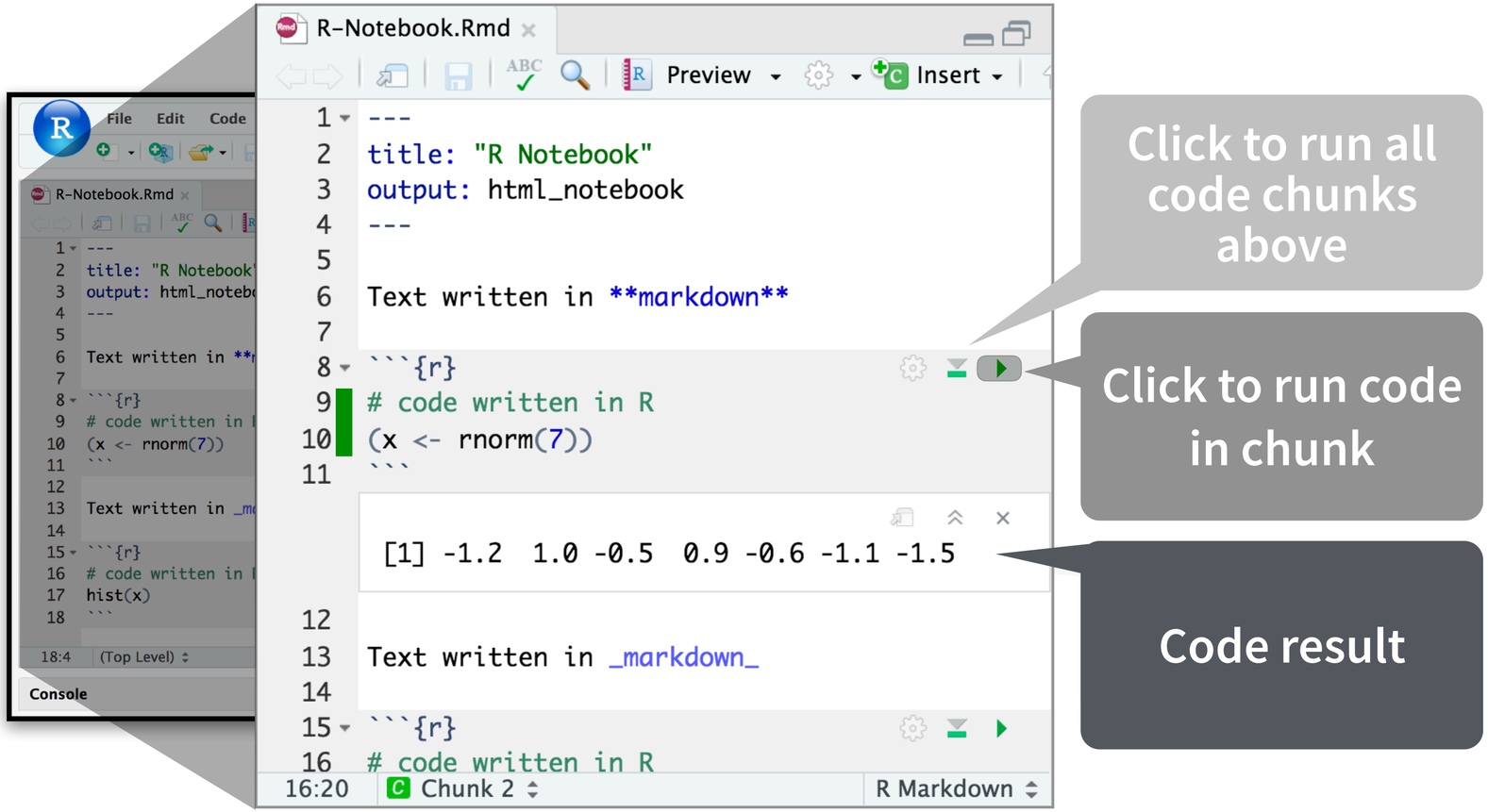
R Notebooks
(Let's start!)

Your Turn

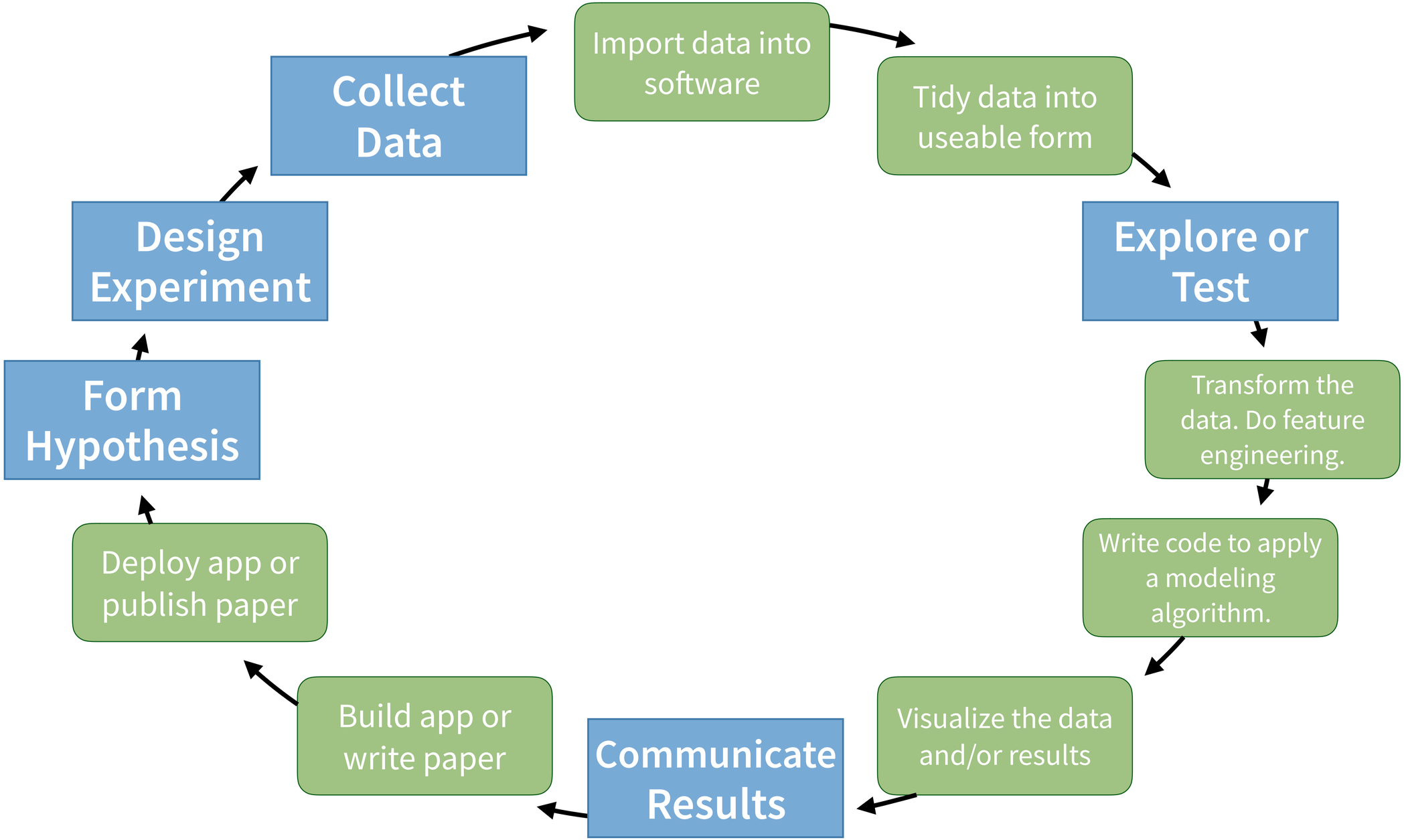
Open **00-Introduction.Rmd**. Read through the notebook and do everything it tells you to do.

R Notebooks

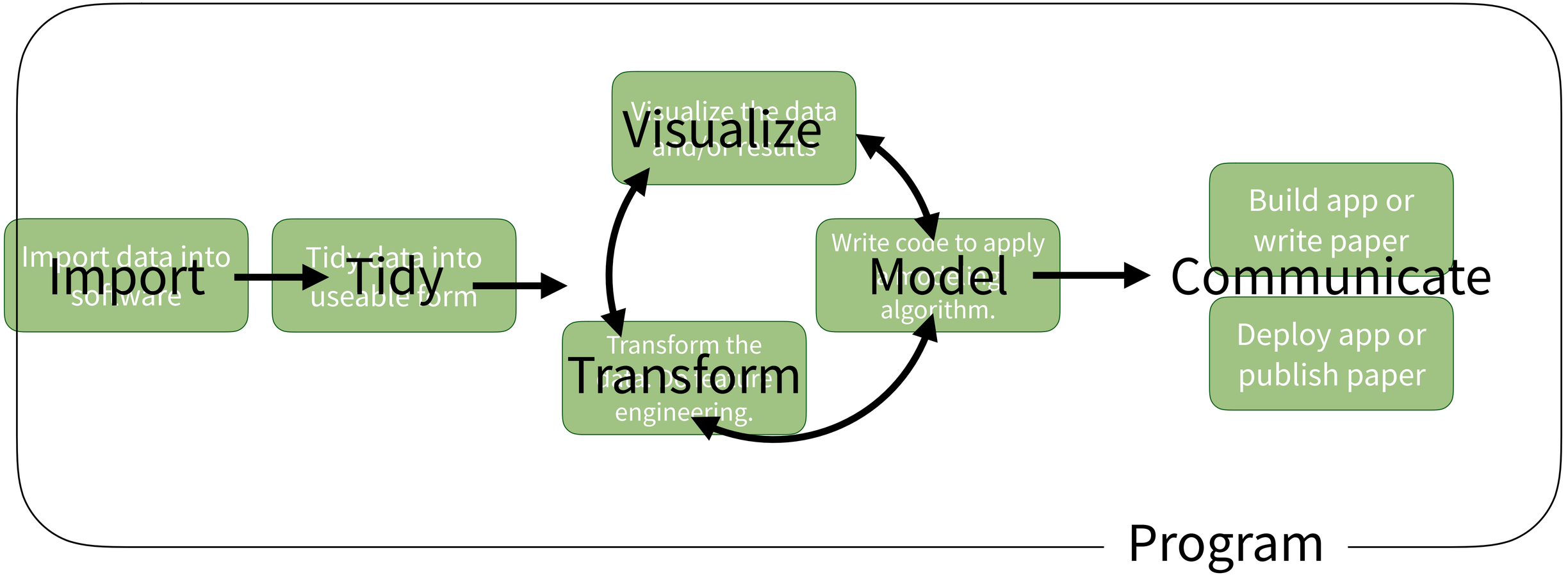
An authoring format for Data Science.



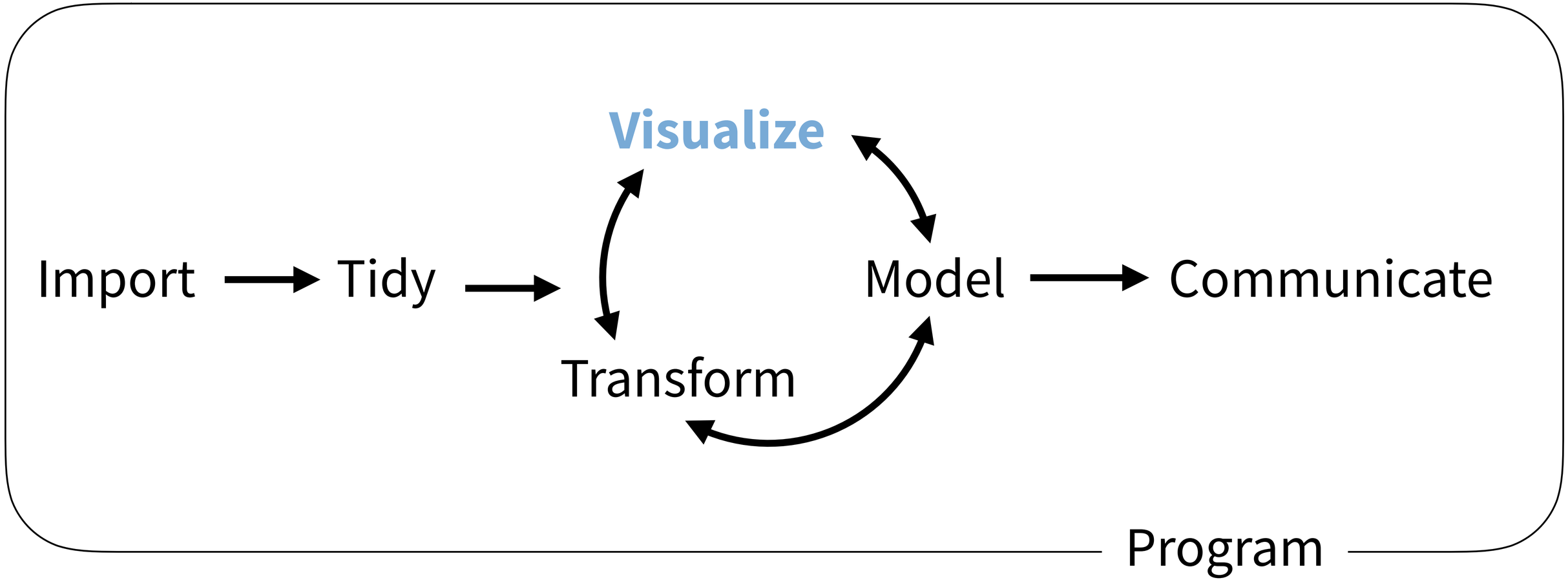
Outro



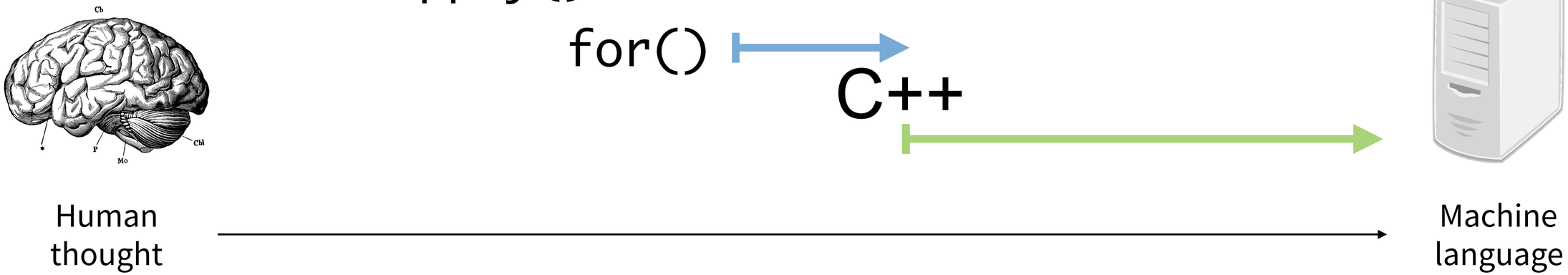
(Applied) **Data Science**



(Applied) **Data Science**



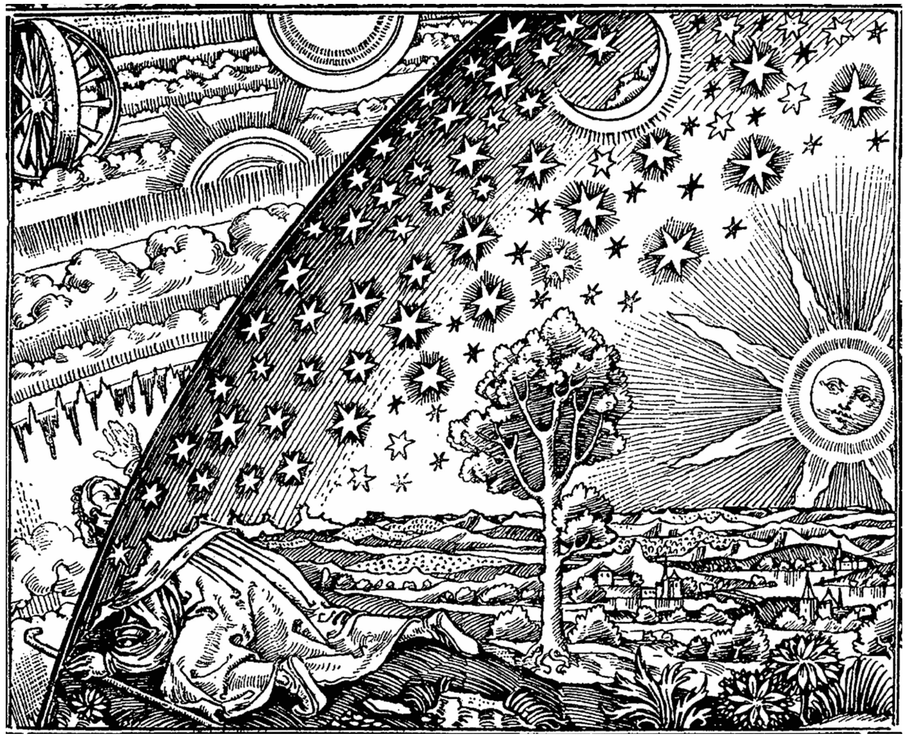
R - A computer language for scientists



Your Turn

Open **01-Visualize-Data.Rmd**.

Master the Tidyverse



Garrett Grolemund

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January 2017

RStudio