

Introduction to R & RStudio



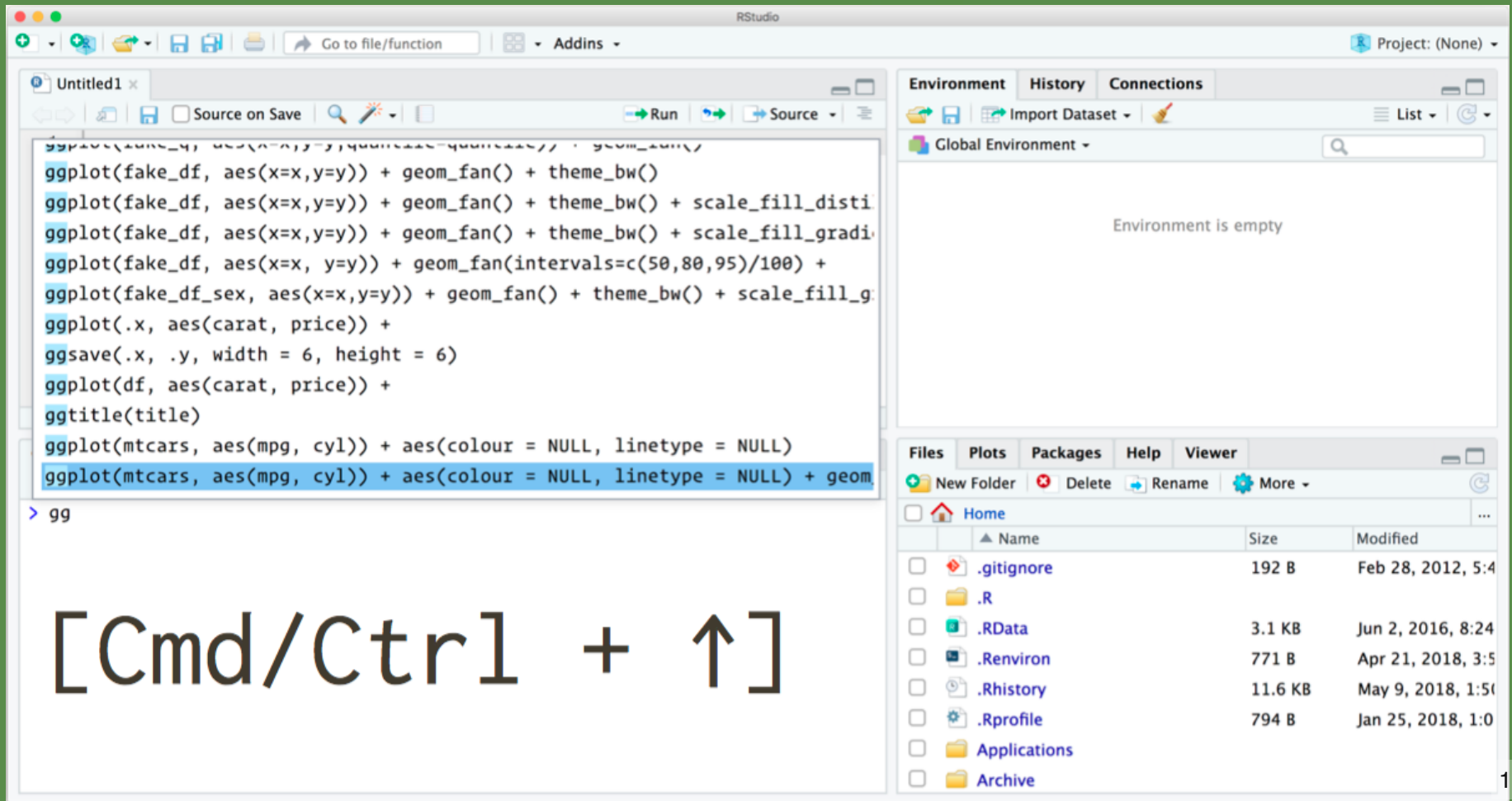


R works without Rstudio
but we strongly
recommend that you use
Rstudio as an IDE



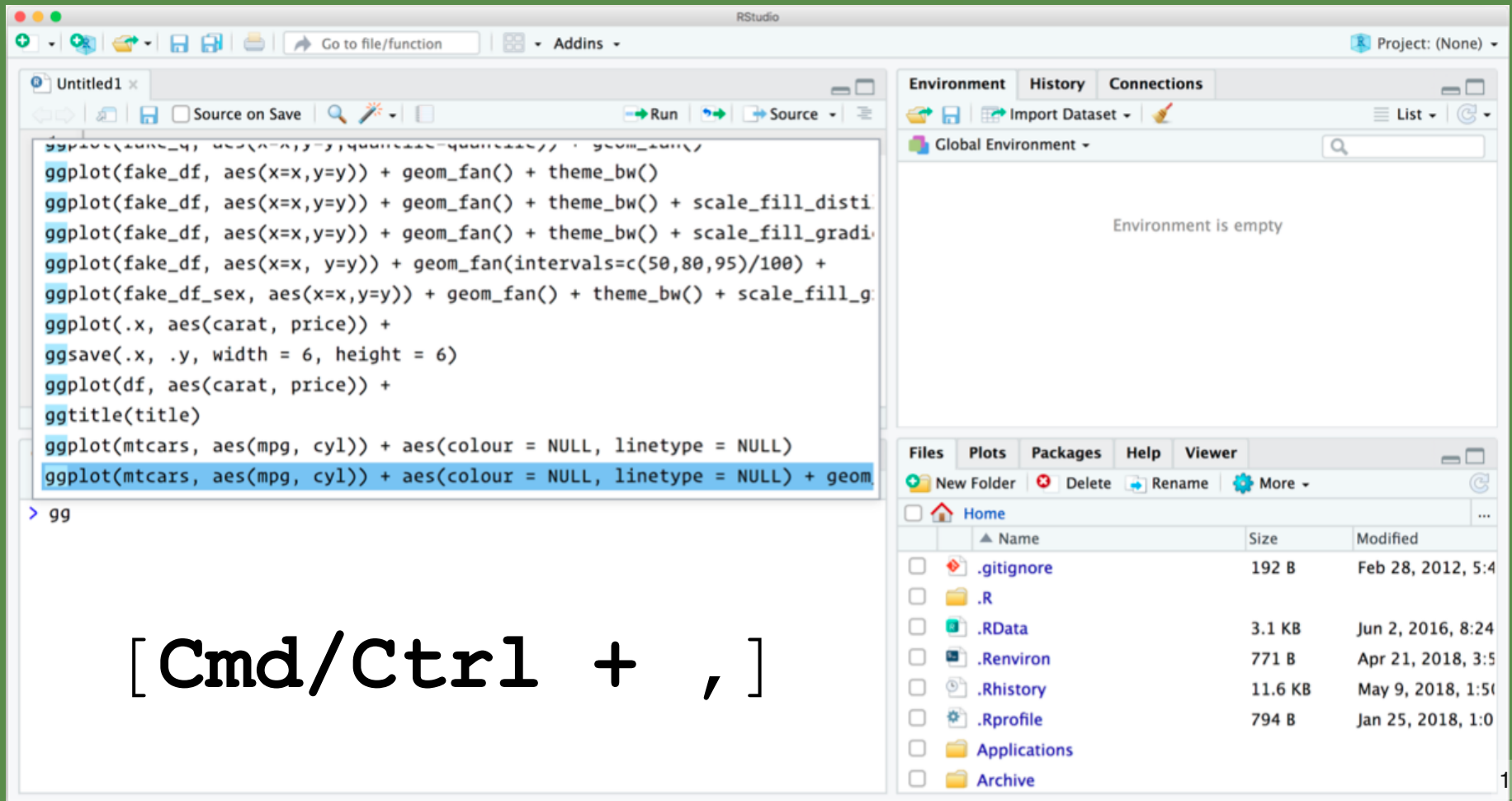
And if you decide to go
with Rstudio, it pays off to
be an expert at using it

The RStudio IDE



[Cmd/Ctrl + ↑]

The RStudio IDE



[Cmd/Ctrl + ,]

Executing code

The screenshot displays the RStudio environment with the following components:

- Source Editor:** Contains an R script with the following code:

```
1 library(tidyverse)
2
3 starwars %>%
4   group_by(species) %>%
5   summarise(mass = mean(mass, na.rm = TRUE), n = n()) %>%
6   arrange(desc(n))
7
```
- Environment Panel:** Shows "Global Environment" and the message "Environment is empty".
- Console:** Shows the prompt `>` with a cursor.
- Files Panel:** Displays a file explorer view of the home directory with the following table:

	Name	Size	Modified
<input type="checkbox"/>	.gitignore	192 B	Feb 28, 2012, 5:4
<input type="checkbox"/>	.R		
<input type="checkbox"/>	.RData	3.1 KB	Jun 2, 2016, 8:24
<input type="checkbox"/>	.Renviron	771 B	Apr 21, 2018, 3:5
<input type="checkbox"/>	.Rhistory	11.6 KB	May 9, 2018, 1:50
<input type="checkbox"/>	.Rprofile	794 B	Jan 25, 2018, 1:0
<input type="checkbox"/>	Applications		
<input type="checkbox"/>	Archive		

[Cmd/ctrl + enter]

Multiple cursors

The screenshot shows the RStudio interface with two open files, 'Untitled1*' and 'Untitled2*'. The main editor window displays the text '[Alt + drag]' in a large font, indicating the keyboard shortcut for creating multiple cursors. The left margin shows line numbers 1 through 8. The bottom-left pane shows the R console with the following code and output:

```
> starwars %>%
+   group_by(species) %>%
+   summarise(mass = mean(mass, na.rm = TRUE), n = n()) %>%
+   arrange(desc(n))
# A tibble: 38 x 3
  species    mass     n
  <chr>    <dbl> <int>
1 Human      82.8     35
2 Droid      69.8      5
3 NA         48      5
4 Gungan      74      3
```

The bottom-right pane shows the file explorer with a list of files and folders:

Name	Size	Modified
.gitignore	192 B	Feb 28, 2012, 5:4
.R		
.RData	3.1 KB	Jun 2, 2016, 8:24
.Renvirom	771 B	Apr 21, 2018, 3:5
.Rhistory	11.6 KB	May 9, 2018, 1:50
.Rprofile	794 B	Jan 25, 2018, 1:0
Applications		
Archive		

Keyboard Shortcuts

Help > Keyboard shortcuts help

Keyboard Shortcut Quick Reference

Category	Shortcut	Action
Tabs	1 "a"	Switch to Tab...
	2 "b"	Next Tab
	3 "c"	Previous Tab
	4 "d"	First Tab
	5 "e"	Last Tab
	6 "f"	First Tab
	7 "g"	Last Tab
	8 "h"	
Panes	1	Move Focus to Source
	2	Move Focus to Console
	3	Move Focus to Terminal
	4	Move Focus to Help
Source Navigation	%F9	Back
	%F10	Forward
	%U	Find Usages
	%E	Use Selection for Find
	%F	Find...
	%G	Find Next
	%G	Find Previous
	%J	Replace and Find
	.	Go To File/Function...
	%G	Go to Line...
Source Editor	%J	Jump To...
	%P	Jump To Matching
	%E	Expand To Matching
	%O	Show Document Outline
	%↑	Add Cursor Above Current Cursor
	%↓	Add Cursor Below Current Cursor
	%↑	Expand Selection
	%↓	Shrink Selection
	%PgDn	Go to Next Section
	%PgUp	Go to Previous Section
Source Control	%I	Insert Chunk
	%R	Insert Section...
	%X	Extract Function
	%V	Extract Variable
	%C	Comment/Uncomment Lines
	%I	Reindent Lines
	%/	Reflow Comment
	%A	Reformat Code
	%D	Show Diagnostics (Project)
	%L	Collapse Fold
Build	%K	Compile PDF
	%K	Preview
	%K	Knit Document
	%B	Install and Restart
	%L	Load All
	%E	Check Package
	%T	Test Package
	%D	Document
	%D	Document
	%D	Document
Console	%L	Clear Console
	%↑	Popup Command History
	%↑	Popup Command History
	%↑	Popup Command History
	%↑	Popup Command History
	%↑	Popup Command History
	%↑	Popup Command History
	%↑	Popup Command History
	%↑	Popup Command History
	%↑	Popup Command History
Terminal	%R	New Terminal
	%F11	Previous Terminal
	%F12	Next Terminal
	%R	New Terminal
	%F11	Previous Terminal
	%F12	Next Terminal
	%R	New Terminal
	%F11	Previous Terminal
	%F12	Next Terminal
	%R	New Terminal

Your turn

What's the shortcut for `<-`
(assignment)?

What about `%>%` (pipe)?

How can you quickly comment a
block of lines?

Other features we'll cover over the week

Using projects, Using git etc

Any questions about Rstudio?