

rbtl - Research Beyond the Lab

Version control and more tools

Lars Schöbitz

2022-04-28

Today

1. Assignment grading and conversion
2. What is Version Control?
3. RStudio Cloud & RStudio IDE

Assignments & Grades

Due dates: Assignments 1, 2, and 3

Full points for assignment 1, 2, and 3 if submitted by:

15th March

Submission complete? Full points?

- If you haven't heard from me by Wednesday, then you have successfully submitted your assignment.

Grade conversion

grade	points
6.00	100
5.75	95
5.50	90
5.25	85
5.00	80
4.75	75
4.50	70
4.25	60
4.00	50
3.50	40
3.00	30
2.50	20
2.00	10
1.00	0

Grading scheme and conversion details in syllabus on course website

What is Version Control?

Version Control

A way to share files with others, so they can:

- download
- re-use
- contribute

You can view the history of files, and jump back in time to any point.

Why is it useful?

Git and GitHub



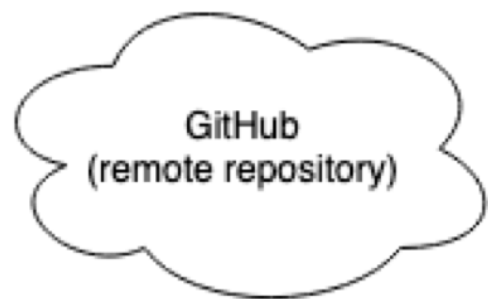
- Git is a software for version control
- Released in 2005
- Popular among programmers collaboratively developing code
- Tracks changes in a set of files (directory/folder/repository)



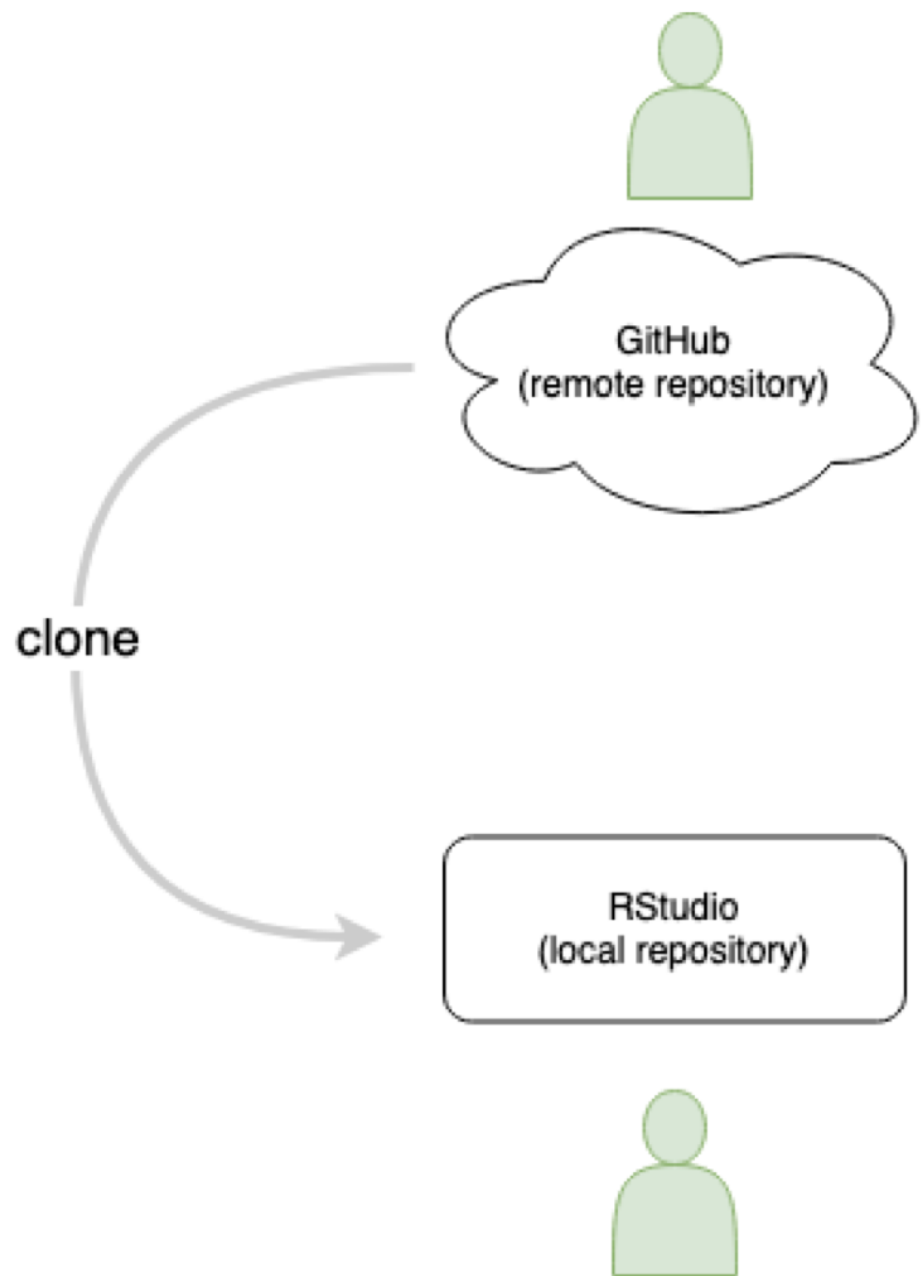
- GitHub is a hosting platform for version control using Git
- Launched in 2008, acquired by Microsoft in 2018, Microsoft for US\$ 7.5 billion
- 73 million Users ([February, 2022](#))
- Facebook for Software Developers

Homework Assignment 2

Version Control - Terminology



GitHub
(remote repository)





Create README.md

75aa637

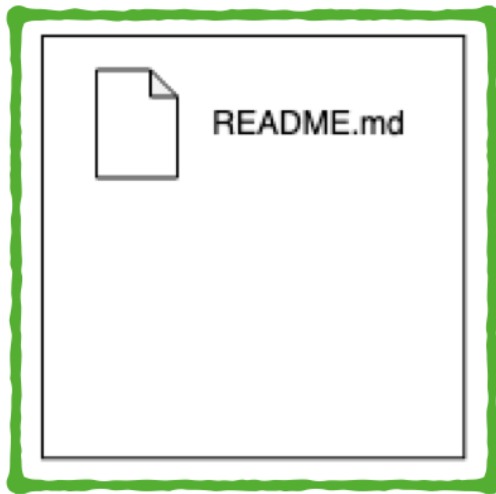


README.md



Create README.md

75aa637



Repo(sitory)

Commit message



Create README.md

75aa637



Repo(sitory)

Commit message



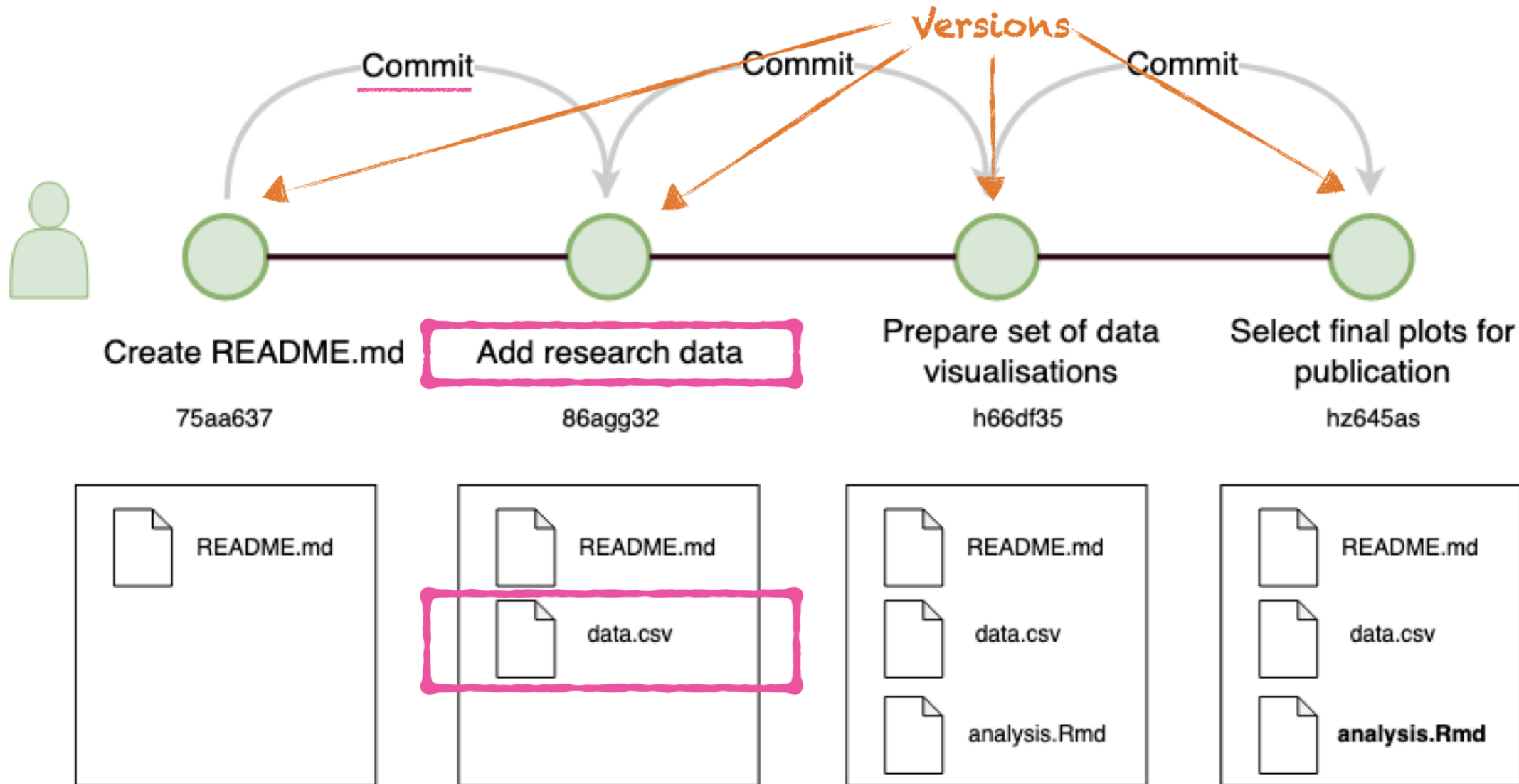
Create README.md

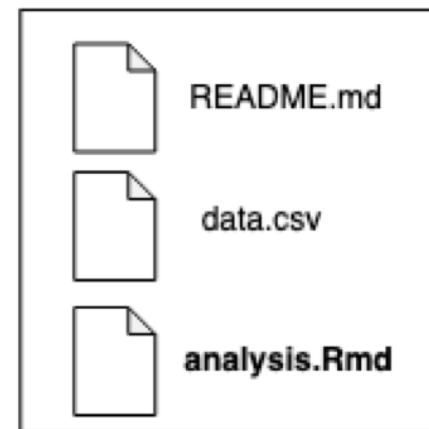
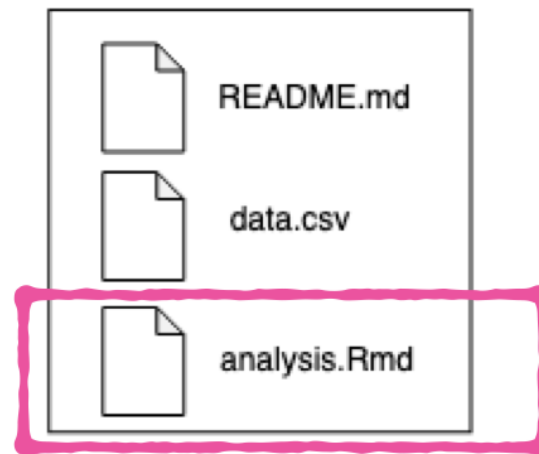
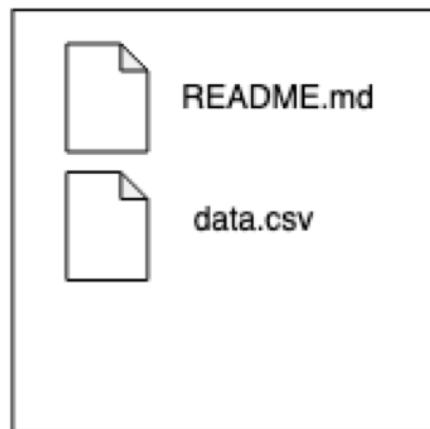
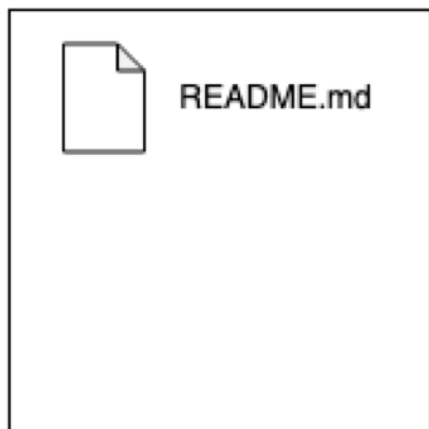
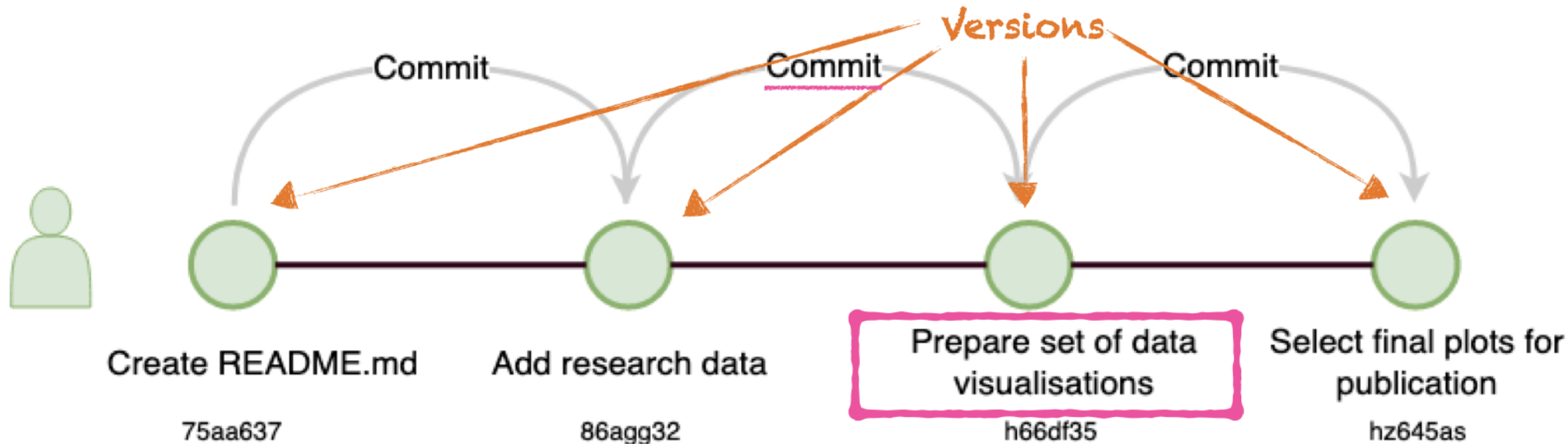
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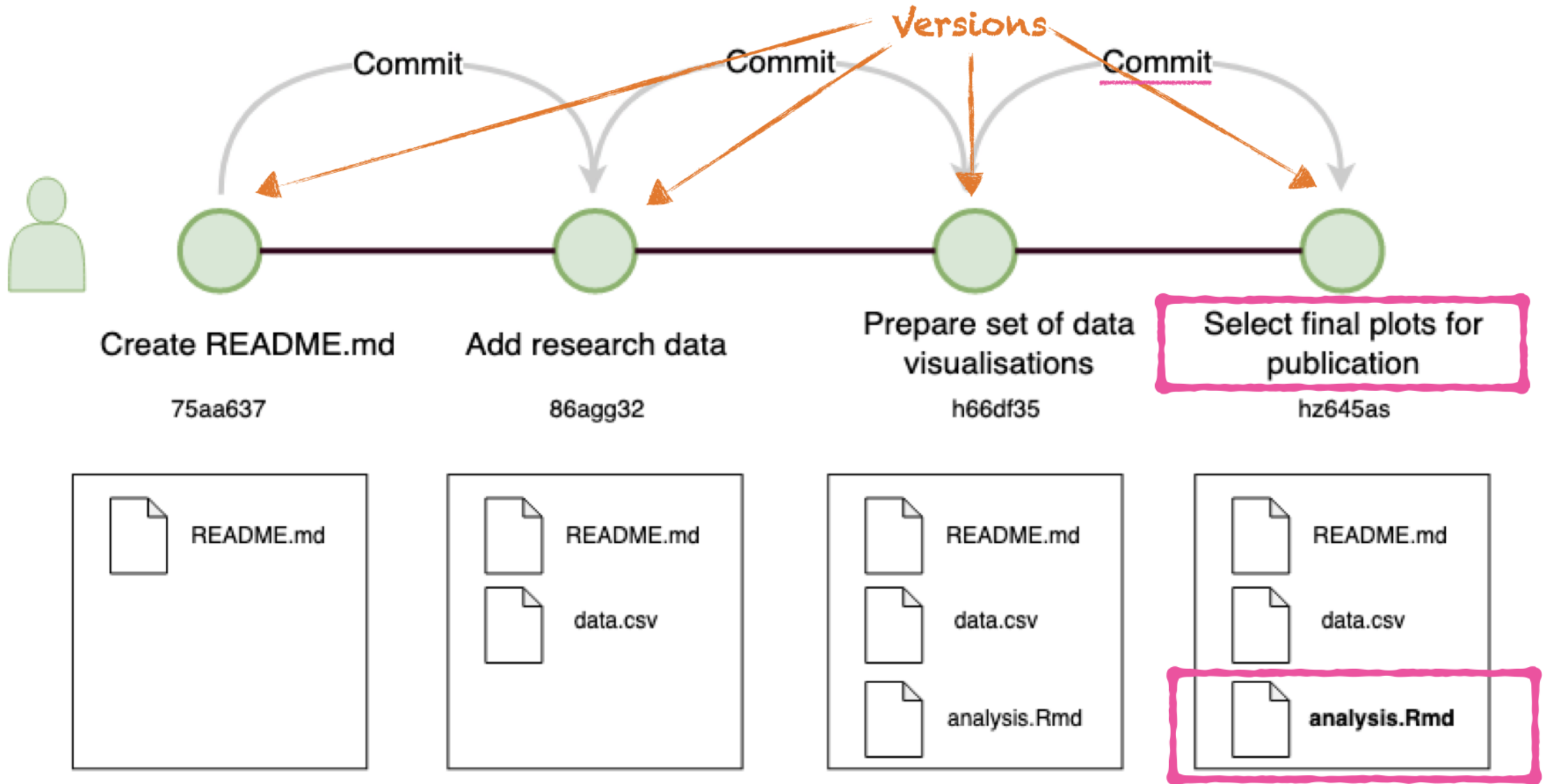
SHA-1 hash

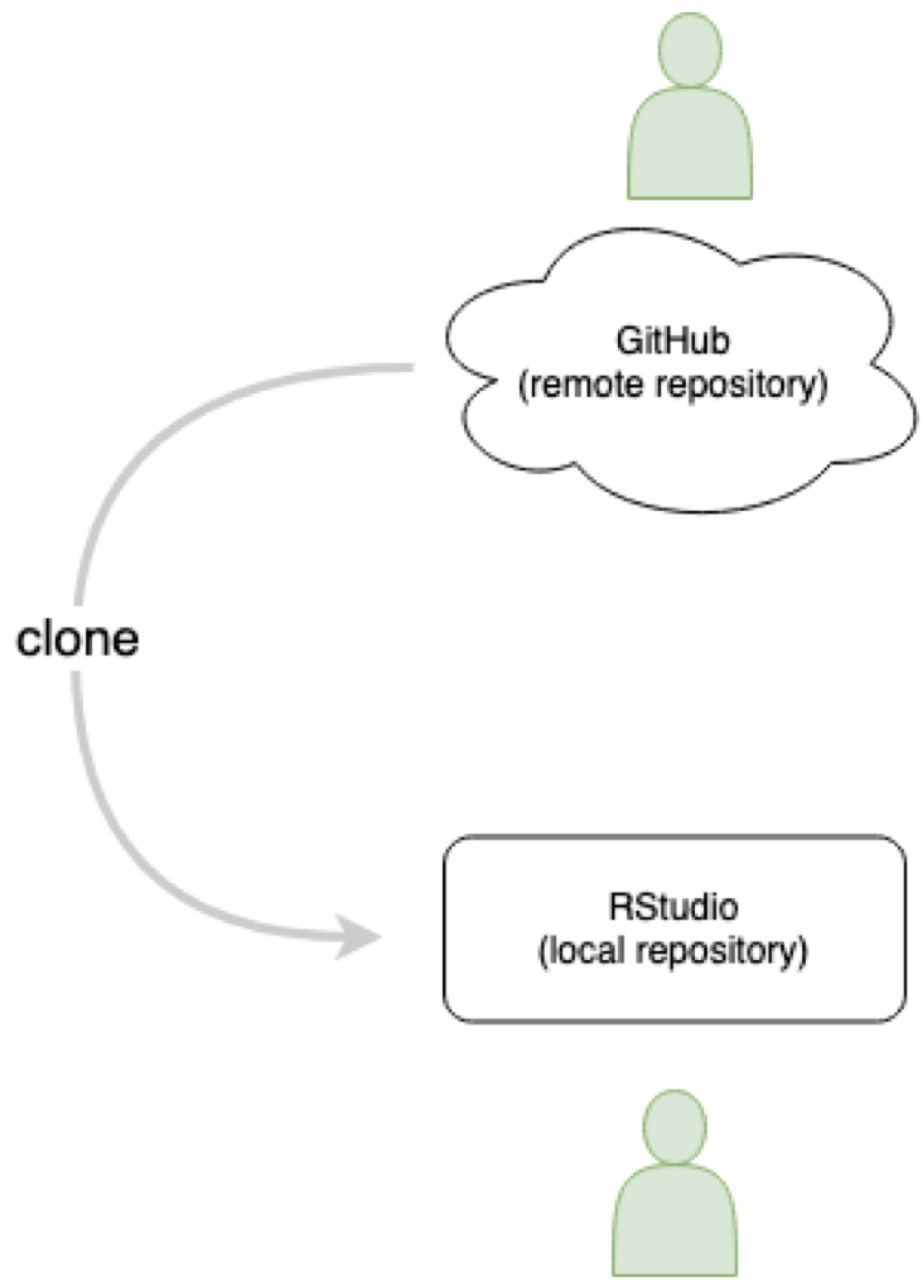


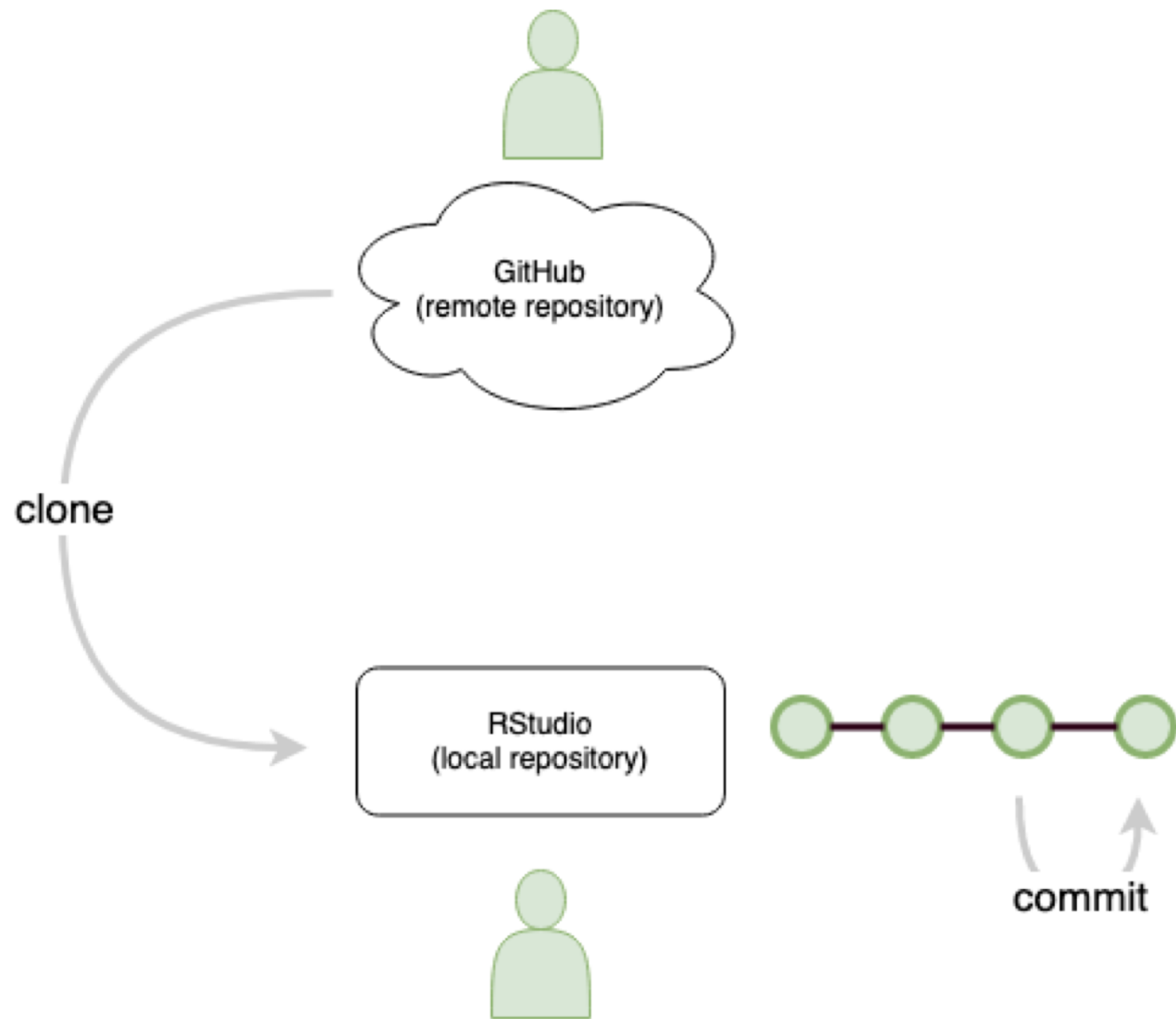
Repo(sitory)

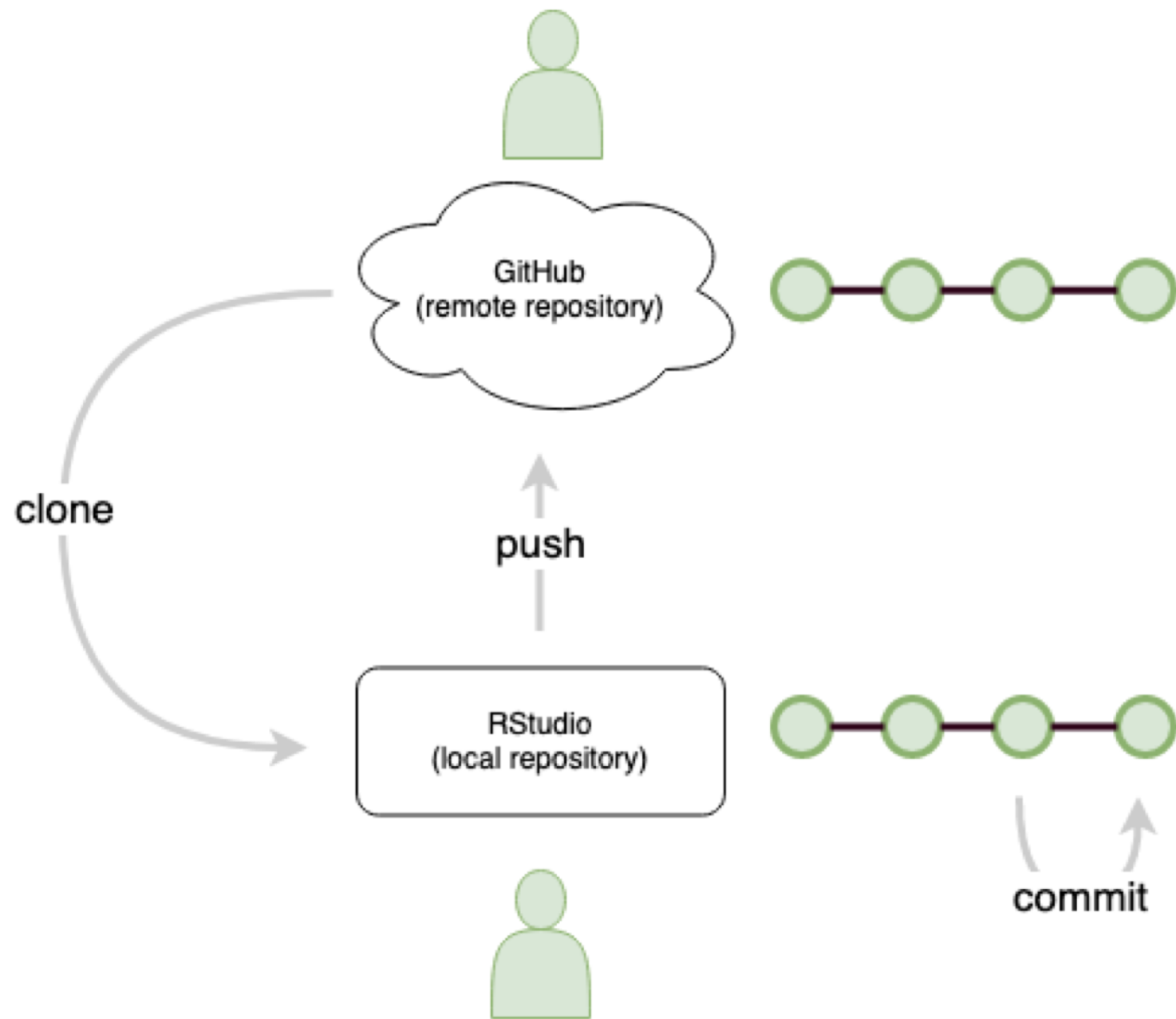












RStudio

RStudio Cloud & RStudio IDE

File Edit Code View Plots Session Build Debug Profile Tools Help

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R 4.1.2

```

107
108 ggplot(data = dat_in_sum_day,
109         mapping = aes(x = date,
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112   geom_point(size = 0.2) +
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116               eight locations") +
117   facet_wrap(~location) +
118   theme_bw(base_size = 12)

```

104:90 # Exercise 2: Learn to identify elements of a plot

Environment History Connections Git Tutorial

Import Dataset 342 MiB

R Global Environment

Data

dat_in	203806 obs. of 6 variables
dat_in_sum_day	890 obs. of 8 variables

Values

dat_link	"https://raw.githubusercontent.com/Global-Health-Eng..."
vec_hospital_name	chr [1:8] "6B" "Administration" "guardian" "Lhouse" ...

Console Terminal Jobs

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Files Plots Packages Help Viewer

New Folder Upload Delete Rename More

Cloud > project

	Name	Size	Modified
📁	..		
📄	.gitignore	593 B	Mar 2, 2022, 1:49 PM
📄	.Rhistory	0 B	Mar 2, 2022, 1:49 PM
📄	ae-02-air-quality.Rproj	205 B	Mar 3, 2022, 10:09 AM
📄	LICENSE.md	1 KB	Mar 2, 2022, 1:49 PM
📁	manuscript		

RStudio Cloud

browser tab

https://rstudio.cloud/spaces/220982/project/3669638

120%

Email rbt1

Rbt1-fs22 / ae-02

RStudio Cloud Workspace

RAM



rainbow-train-fs22

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Go to file/function Addins R 4.1.2

man-air-quality-malawi-hospital.R...

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RStudio IDE Menu

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Code Editor

Environment History Connections Git Tutorial

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Code Editor

Environment History Connections Git Tutorial

342 MiB

Data

- dat_in
- dat_in_s

Values

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116         # lab(howto(aes(ma2)))
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Code Editor

Environment History Connections Git Tutorial

Import Dataset 342 MiB

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dat_in

dat_in_s

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Git

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File Manager

```
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104:90 # Exercise 2: Learn to identify elements of a plot
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Code Editor

Environment and Git panels. The Environment panel shows variables `dat_in` and `dat_in_s`. The Git panel shows a table of values:

Variable	Value
<code>dat_link</code>	"https://raw.githubusercontent.com/Global-Health-Eng..."
<code>vec_hospital_name</code>	chr [1:8] "6B" "Administration" "guardian" "Lhouse" ...

Environment
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```

Console

Files panel showing a file manager view of the project directory:

Name	Size	Modified
<code>..</code>		
<code>.gitignore</code>		9 PM
<code>.Rhistory</code>		9 PM
<code>ae-02-air-quality.Rproj</code>	205 B	Mar 3, 2022, 10:09 AM
<code>LICENSE.md</code>	1 KB	Mar 2, 2022, 1:49 PM
<code>manuscript</code>		

File Manager

Photo by: Matt Walsh



Thanks! 

Slides created via the R packages:

xaringan

[gadenbuie/xaringantheme](#)

The chakra comes from [remark.js](#), **knitr**, and R Markdown.

Access slides as PDF on [GitHub](#)

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