

Data Wrangling in R

Reproducible Research

What is Reproducible Research?

Author



Published
Article

Nature



Protocol



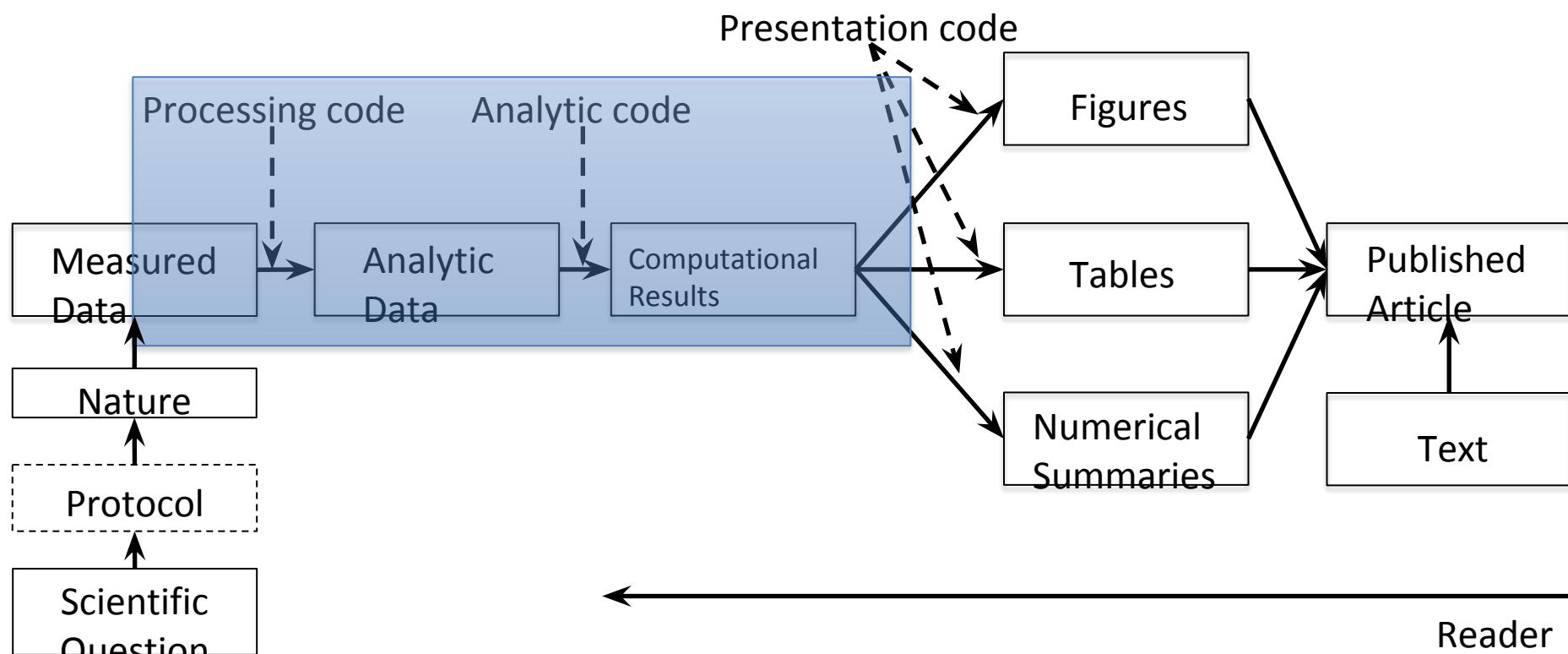
Scientific
Question

← Express train to nature

Reader

What is Reproducible Research?

Author



Reader

Uh....who cares?

Growth in a Time of Debt

By CARMEN M. REINHART AND KENNETH S. ROGOFF*

In this paper, we exploit a new multi-country historical dataset on public (government) debt to search for a systemic relationship between high public debt levels, growth and inflation.¹ Our main result is that whereas the link between growth and debt seems relatively weak at “normal” debt levels, median growth rates for countries with public debt over roughly 90 percent of GDP are about one percent lower than otherwise; average (mean) growth rates are several percent lower. Surprisingly, the relationship between public debt and growth is remarkably similar across emerging markets and advanced economies. This is not the case for inflation. We find no systematic relationship between high debt levels and inflation for advanced economies as a group (albeit with individual country exceptions including the United States). By contrast, in emerging market countries, high public debt levels coincide with higher inflation.

*Our topic would seem to be a timely one

especially against the backdrop of graying populations and rising social insurance costs? Are sharply elevated public debts ultimately a manageable policy challenge?

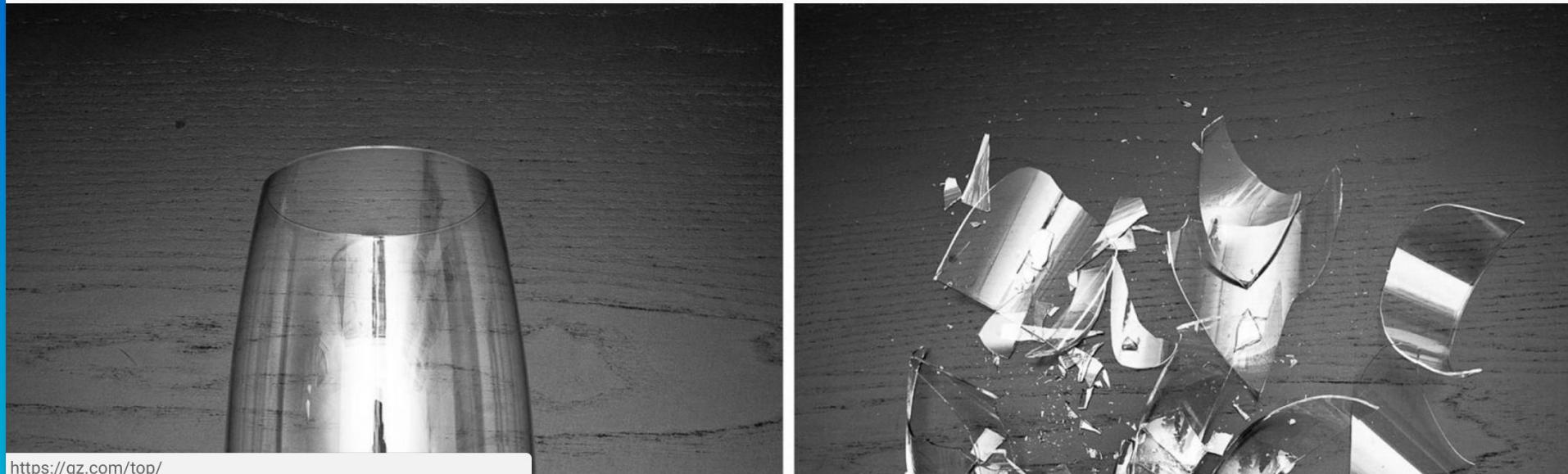
Our approach here is decidedly empirical, taking advantage of a broad new historical dataset on public debt (in particular, central government debt) first presented in Carmen M. Reinhart and Kenneth S. Rogoff (2008, 2009b). Prior to this dataset, it was exceedingly difficult to get more than two or three decades of public debt data even for many rich countries, and virtually impossible for most emerging markets. Our results incorporate data on 44 countries spanning about 200 years. Taken together, the data incorporate over 3,700 annual observations covering a wide range of political systems, institutions, exchange rate and monetary arrangements, and historic circumstances.

We also employ more recent data on external debt including debt owned both by governments



FIXING SCIENCE

Most science research findings are false. Here's how we can change that





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About 176,000,000 results (0.43 seconds)

Most Scientific Findings Are Wrong or Useless - Reason.com

reason.com/archives/2016/08/26/most-scientific-results-are-wrong-or-use ▾

Aug 26, 2016 - Scientist Yanlev Dreamstime Yanlev/Dreamstime "Science, the pride of modernity, our one source of objective knowledge, is in deep trouble.

PLOS Medicine: Why Most Published Research Findings Are False

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<https://www.youtube.com/watch?v=42QuXLucH3Q>

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Why Most Published Research Findings Are False: The problem with the approach to science is that ...

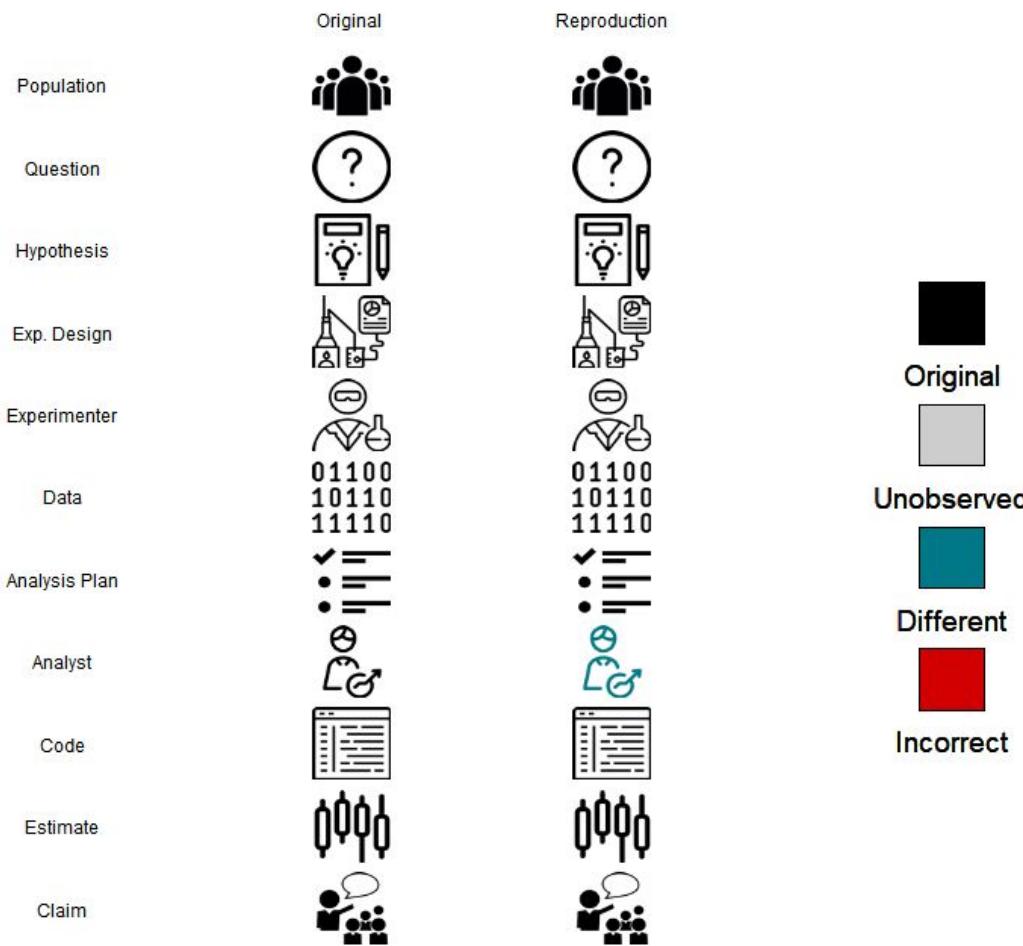
176,000,000!

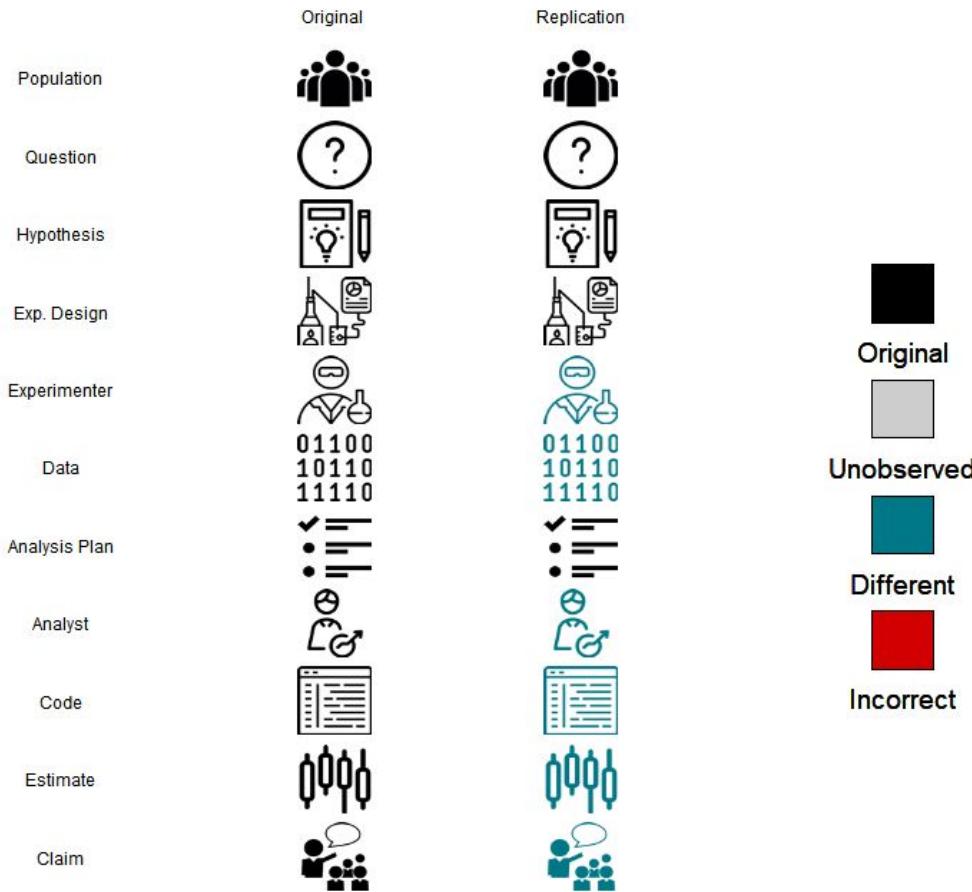
Believe It Or Not, Most Published Research Findings Are Probably ...

bigthink.com/.../believe-it-or-not-most-published-research-findings-are-probably-fals... ▾

Ten years ago, a researcher claimed most published research findings are false; ... of the Internet has worked wonders for the public's access to science, but this ... the case, experiments are underpowered,

Reproduce & replicate





PUBLIC

jtleek / swfdr

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3

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2



Code

Network

Pull Requests 0

Issues 0

Wiki

Graphs

Settings

R code for calculating the Science-wise False Discovery Rate — [Read more](#)[Clone in Mac](#)[ZIP](#)[HTTP](#)[SSH](#)[Git Read-Only](#)<https://github.com/jtleek/swfdr.git>

Read+Write access

branch: master

Files

Commits

Branches 1

Tags

swfdr / [+](#)

4 commits

Updated analysis to deal with name permutation in figures, added boot...

latest commit a93c7835dd [Edit](#)

.DS_Store	5 months ago	First draft of files [jtleek]
.Rhistory	a month ago	Updated analysis to deal with name permutation in figures, added boot... [jtleek]
README.md	3 months ago	Changes made for revision for Biostatistics, including adding sensiti... [jtleek]
all-significant.pdf	3 months ago	Changes made for revision for Biostatistics, including adding sensiti... [jtleek]
calculateSwfdr.R	5 months ago	First draft of files [jtleek]
floored-rounding.pdf	3 months ago	Changes made for revision for Biostatistics, including adding sensiti... [jtleek]
getPValues.R	5 months ago	First draft of files [jtleek]
journalAnalysis.R	a month ago	Updated analysis to deal with name permutation in figures, added boot... [jtleek]
journalAnalysisHelp.R	5 months ago	First draft of files [jtleek]
only-min.pdf	3 months ago	Changes made for revision for Biostatistics, including adding sensiti... [jtleek]
pi0JournalBoot.rda	a month ago	Updated analysis to deal with name permutation in figures, added boot... [jtleek]
pi0OverallBoot.rda	a month ago	Updated analysis to deal with name permutation in figures, added boot... [jtleek]

<https://github.com/jtleek/swfdr>

25
SEP

Is most science false? The titans weigh in.

POSTED BY JEFF LEEK / UNCATEGORIZED

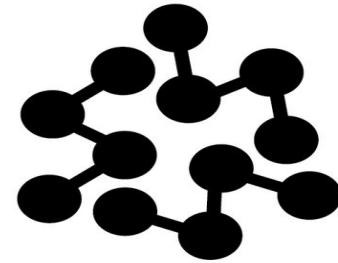


Some of you may recall that a few months ago my colleague and I posted a [paper](#) to the ArXiv on estimating the rate of false discoveries in the scientific literature. The paper was picked up by the [Tech Review](#) and led to a post on [Andrew G.'s blog](#), [on Discover blogs](#), and [on our blog](#). One other interesting feature of our paper was that we put all the [code/data we collected on Github](#).

At the time this whole thing blew up our paper still wasn't published. After the explosion of interest we submitted the paper to Biostatistics. They liked the paper and actually solicited formal discussion of our approach by other statisticians. We were then allowed to respond to the discussions.

Overall, it was an awesome experience at Biostatistics - they did a great job of doing a thorough, but timely, review. They got some amazing discussants. Finally, they made our paper open-access. So much goodness. (conflict of interest disclaimer - I am an associate editor for Biostatistics)

Here are the papers that came out which I think are all worth reading:



RECENT POSTS

[The statistics department Moneyball opportunity](#)

[The Mozilla Fellowship for Science](#)

[JHU, UMD researchers are getting a really big Big Data center](#)

[The Massive Future of Statistics Education](#)
[Looks like this R thing might be for real](#)

“I think that it is ironic that a paper that claims to prove the reliability of the literature had completely messed up the two main figures that represent the core of all its data and its main results.”

When human harm isn't involved

A few things that would reduce stress around reproducibility/replicability in science

 Jeff Leek  2017/11/21

I was listening to the Effort Report Episode on [The Messy Execution of Reproducible Research](#) where they were discussing the piece about [Amy Cuddy in the New York Times](#). I think both the article and the podcast did a good job of discussing the nuances of the importance of reproducibility and the challenges of the social interactions around this topic. After listening to the podcast I realized that I see a lot of posts about reproducibility/replicability, but many of them are focused on the technical side. So I started to think about compiling a list of more cultural things we can do to reduce the stress/pressure around the reproducibility crisis.

I'm sure others have pointed these out in other places but I am procrastinating writing something else so I'm writing these down while I'm thinking about them :).

- 1. We can define what we mean by “reproduce” and “replicate”** Different fields have different definitions of the words *reproduce* and *replicate*. If you are publishing a new study we now have an [R package](#) that you can use to create figures that show what changed and what was the same between the original study and your new work. Defining concretely what was the same and different will reduce some of the miscommunication about what a reproducibility/replicability study means.

When human harm could happen

From the article:

Cancer trial errors revealed

2006 Anil Potti, a cancer geneticist at Duke University in Durham, North Carolina, and others file patent applications on the idea of using gene-expression data to predict sensitivity to cancer drugs. Potti is first author on a paper in *Nature Medicine*¹.

2007 Potti is last author on a paper in the *Journal of Clinical Oncology (JCO)*². Duke begins three clinical trials to test Potti's predictors in patients with breast or lung cancer.

SEPTEMBER 2009 Keith Baggerly and Kevin Coombes, statisticians at the University of Texas M. D. Anderson Cancer Centre in Houston, publish a paper in *Annals of Applied Statistics*³ stating that they could not replicate Potti's claims. Duke suspends the trials and asks a review panel to investigate.

NOVEMBER 2009 Potti places data underlying the *JCO* paper online. Baggerly writes to Sally Kornbluth, Duke vice-dean for research, and Michael Cuffe, Duke vice-president for medical affairs, to point out differences from raw data.

DECEMBER 2009 An unredacted copy of the report by Duke's review panel, later obtained by *Nature*, shows that the panel replicated Potti's claims using his data, but were unaware that those data contained discrepancies.

JANUARY 2010 Duke restarts clinical trials.

JULY 2010 *The Cancer Letter* reveals that Potti made false claims about his CV. Trials are suspended and an investigation begins. Harold Varmus, director of the National Cancer Institute in Bethesda, Maryland, asks the Institute of Medicine to review Duke's trials.

NOVEMBER 2010 *JCO* paper is retracted. Duke closes the trials permanently. Potti resigns.

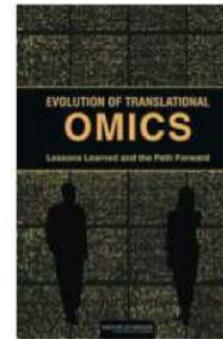
DECEMBER 2010 Institute of Medicine study begins, but will now focus more generally on criteria for genomics predictor.

JANUARY 2011 *Nature Medicine* paper is retracted.

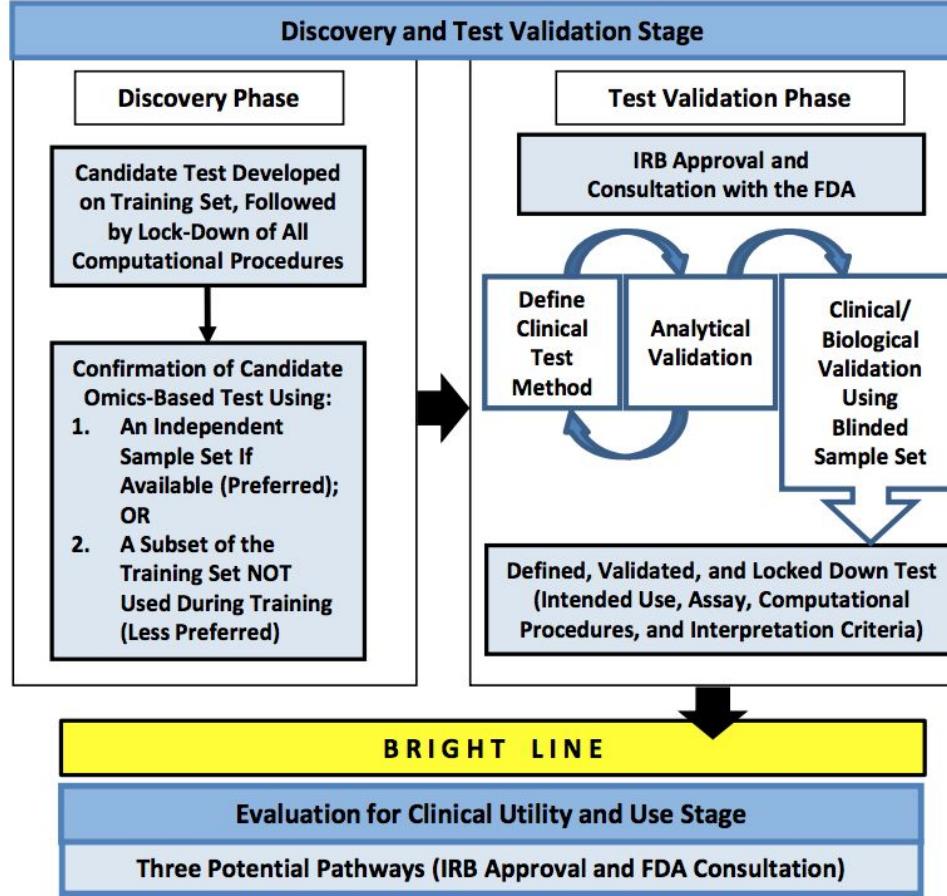
For more information visit www.iom.edu/translationalomics

Evolution of Translational Omics

Lessons Learned and the
Path Forward



Sequencing the human genome opened a new era in biomedical science. Researchers have begun to untangle the complex roles of biology and genetics in specific diseases, and now better understand why particular therapies do or do not work in individual patients. New technologies have made it feasible to measure an enormous number of molecules within a tissue or cell; for example, genomics investigates thousands of DNA sequences, and proteomics examines large numbers of proteins. Collectively, these technologies are referred to as *omics*.



1. Code + documentation
2. Versions of software
3. Data provenance

Your closest collaborator is
you six months ago, but you
don't reply to emails

- Karl Broman

(http://kbroman.org/Tools4RR/assets/lectures/06_org_eda.pdf)

Could you just re-run that code
with the [latest/different/best]
parameters?

- Every collaborator/PI

The magic of Markdown

- bullets
- **bold**
- *italics*
- [links](<https://google.com>)
- or run inline `r code`



- bullets
- **bold**
- *italics*
- [links](#)
- or run inline r code

Introduction

Here is some background you need to know:

 Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nullam iaculis enim ut enim viverra molestie. In lacinia aliquet urna, nec vulputate quam congue et. Maecenas porta mauris sem, nec laoreet sapien tincidunt non. Integer sit amet consequat neque, non iaculis ligula.

Hypothesis

Pellentesque molestie erat nec elit efficitur, sit amet sodales erat viverra. Mauris sed commodo eros, ac volutpat sem. Morbi convallis leo et dui cursus, eu suscipit turpis efficitur.

section 1 code and results

First I will run this.

```
```{r}
print("Hello world")
print("Yup, this is important")
```

The output of which is consistent with my hypothesis.

## # Conclusion

I can move on to the next part of my project|

# .Rmd document



# PDF, HTML or Word document

## Introduction

Here is some background you need to know:

  Lorem ipsum dolor sit amet, consectetur adipiscing elit. Nullam iaculis enim ut enim viverra molestie. In lacinia aliquet urna, nec vulputate quam congue et. Maecenas porta mauris sem, nec laoreet sapien tincidunt non. Integer sit amet consequat neque, non iaculis ligula.

## Hypothesis

Pellentesque molestie erat nec elit efficitur, sit amet sodales erat viverra. Mauris sed commodo eros, ac volutpat sem. Morbi convallis leo et dui cursus, eu suscipit turpis efficitur.

## Section 1 code and results

First I will run this.

```
print("Hello world")
[1] "Hello world"
print("Yup, this is important")
[1] "Yup, this is important"
```

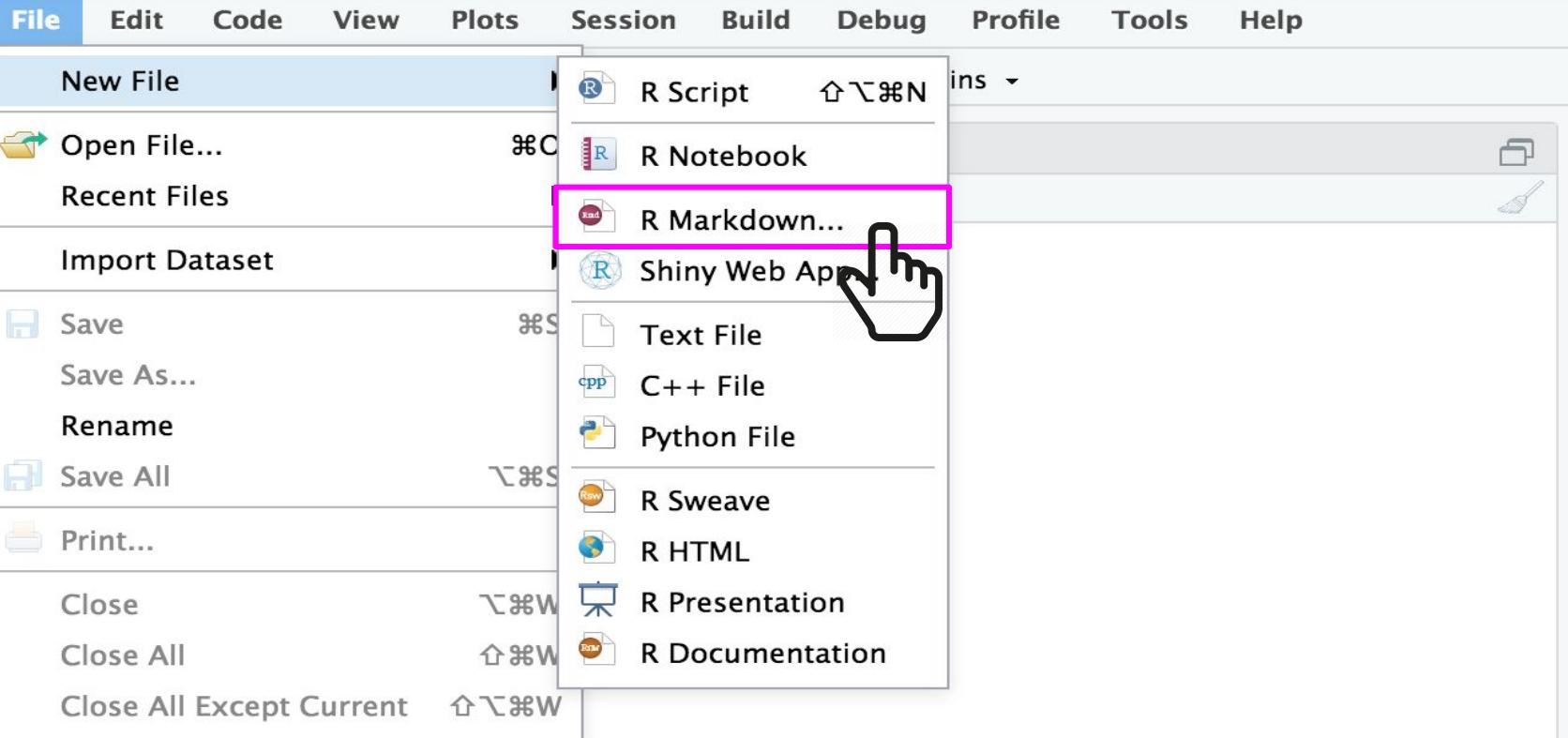
The output of which is consistent with my hypothesis.

## Conclusion

I can move on to the next part of my project

Another major benefit to R Markdown is that since it is plain text, it works very well with version control systems. It is easy to track what character changes occur between commits; unlike other formats that aren't plain text. For example, in one version of this lesson, I may have forgotten to bold this word. When I catch my mistake, I can make the plain text changes to signal I would like that word bolded, and in the commit, you can see the exact character changes that occurred to now make the word bold.

Another major benefit to R Markdown is that since it is plain text, it works very well with version control systems. It is easy to track what character changes occur between commits; unlike other formats that aren't plain text. For example, in one version of this lesson, I may have forgotten to bold **\*\*this\*\*** word. When I catch my mistake, I can make the plain text changes to signal I would like that word bolded, and in the commit, you can see the exact character changes that occurred to now make the word bold.



```
version.string R version 3.4.4 (2018-03-15)
nickname Someone to Lean On
```

## Install Required Packages



Creating R Markdown documents requires updated versions of the following packages: evaluate, highr, markdown, yaml, htmltools, caTools, bitops, knitr, jsonlite, base64enc, rprojroot, rmarkdown.

Do you want to install these packages now?

Yes

No



## New R Markdown

 Document

 Presentation

 Shiny

 From Template

Title:

Author:

### Default Output Format:

HTML

Recommended format for authoring (you can switch to PDF or Word output anytime).

PDF

PDF output requires TeX (MiKTeX on Windows, MacTeX 2013+ on OS X, TeX Live 2013+ on Linux).

Word

Previewing Word documents requires an installation of MS Word (or Libre/Open Office on Linux).

OK

Cancel

## New R Markdown

 Document

 Presentation

 Shiny

 From Template

Title:

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### Default Output Format:

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PDF

PDF output requires TeX (MiKTeX on Windows, MacTeX 2013+ on OS X, TeX Live 2013+ on Linux).

Word

Previewing Word documents requires an installation of MS Word (or Libre/Open Office on Linux).

OK



Cancel

The screenshot shows the RStudio interface with an R Markdown document titled "Untitled1". The code editor displays the following content:

```
1 --
2 title: "My First R Markdown Document!"
3 author: "Jane Doe"
4 date: "5/31/2018"
5 output: html_document
6 ---
7
8 ```{r setup, include=FALSE}
9 knitr::opts_chunk$set(echo = TRUE)
10 ```
11
12 ## R Markdown TEXT
13
14 This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.
15
16 When you click the **Knit** button a document will be generated that includes both content as well as the
17 output of any embedded R code chunks within the document. You can embed an R code chunk like this:
18 ```{r cars}
19 summary(cars)
20 ```
21
22 ## Including Plots
23
24 You can also embed plots, for example:
25
26 ```{r pressure, echo=FALSE}
27 plot(pressure)
28 ```

The word "TEXT" is highlighted in pink, and the section "CODE CHUNK" is also highlighted in pink.


```

Untitled1

ABC 🔎 ↻ Knit ⚙️

```
1 ---
2 title: "My First R Markdown Document!"
3 author: "Jane Doe"
4 date: "5/31/2018"
5 output: html_document
6 ---
7
8 ```{r setup, include=FALSE}
9 knitr::opts_chunk$set(echo = TRUE)
10 ```
11
12 ## R Markdown
13
14 This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.
15
16 When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:
17
18 ```{r cars}
19 summary(cars)
20 ```
21
22 ## Including Plots
23
24 You can also embed plots, for example:
25
26 ```{r pressure, echo=FALSE}
27 plot(pressure)
28 ```
```

# My First R Markdown Document! R Markdown

## Save File – Untitled1

File name:

/ > cloud > project



..

.Rhistory

0 B May 30, 2018, 12:34 PM

project.Rproj

205 B May 31, 2018, 3:35 PM

New Folder

Save

Cancel



Secure | https://jane-doe.rstudio.cloud/bb47ce0a189a4db9acef6493b8561914/?view=rmarkdown

test\_document.html | Open in Browser | Find

Header rendered as the title

# My First R Markdown Document!

Jane Doe

5/31/2018

## R Markdown

Text section rendered as formatted text

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
summary(cars)
```

```
speed dist
Min. : 4.0 Min. : 2.00
1st Qu.:12.0 1st Qu.: 26.00
Median :15.0 Median : 36.00
Mean :15.4 Mean : 42.98
3rd Qu.:19.0 3rd Qu.: 56.00
Max. :25.0 Max. :120.00
```

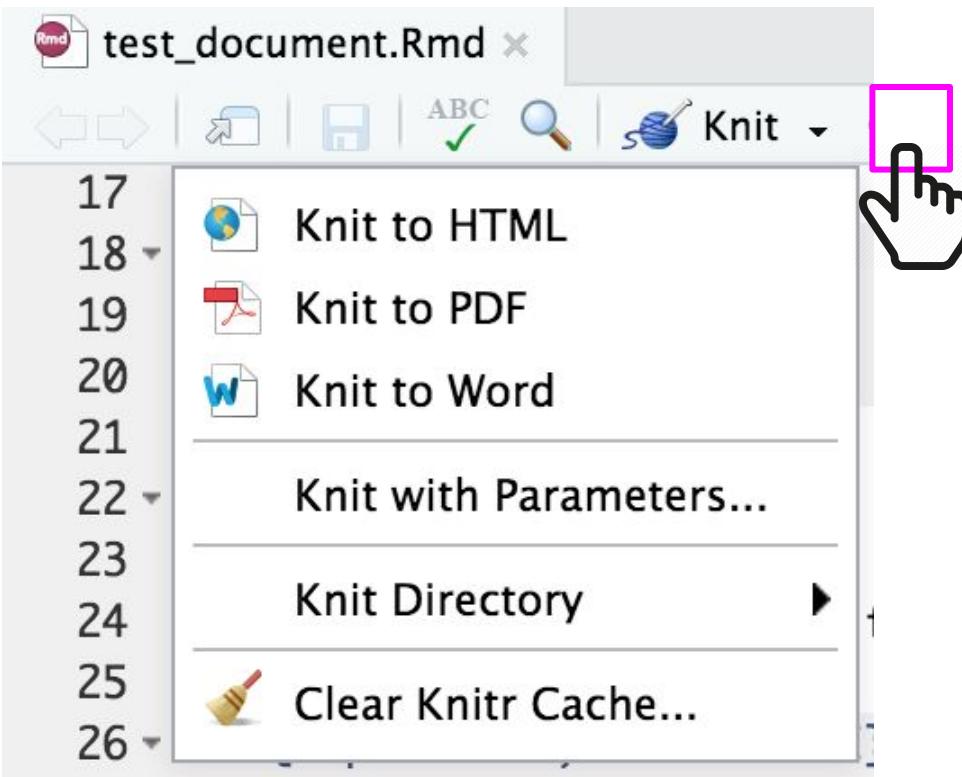
Code rendered as the input code AND the output of running the code chunk

## Including Plots

You can also embed plots, for example:

The screenshot shows the RStudio interface with the following components:

- Left Panel (Code Editor):** Displays the R Markdown file `test_document.Rmd`. The code includes YAML front matter, R code chunks, and a Markdown section. The file path is `/cloud/project/test_document.Rmd`.
- Top Bar:** Includes tabs for Environment, History, and Connections, along with various icons for file operations like New Folder, Upload, Delete, Rename, and More.
- File Explorer:** Shows the project structure with files `.Rhistory`, `project.Rproj`, `test_document.html` (highlighted with a pink rectangle), and `test_document.Rmd`.
- Console:** Shows the command `/cloud/project/` and a prompt `> |`.
- Status Bar:** Displays the line number 17:1 and the mode `R Markdown`.



[Introduction](#)[How It Works](#)[Code Chunks](#)[Inline Code](#)[Code Languages](#)[Parameters](#)[Tables](#)[Markdown Basics](#)[Output Formats](#)[Notebooks](#)[Slide Presentations](#)[Dashboards](#)[Websites](#)[Interactive Documents](#)[Cheatsheets](#)

# How It Works

This is an R Markdown file, a plain text file that has the extension `.Rmd`. You can download a copy [here](#).

The screenshot shows the RStudio interface with the '1-example.Rmd' file open. The code editor displays the following R Markdown code:

```
1---
2title: "Viridis Demo"
3output: html_document
4---
5
6```{r include = FALSE}
7library(viridis)
8```
9
10The code below demonstrates two color palettes in the
[viridis](https://github.com/sjmgarnier/viridis) package. Each
plot displays a contour map of the Maunga Whau volcano in
Auckland, New Zealand.
11
12## Viridis colors
13
14```{r}
15image(volcano, col = viridis(200))
16```
17
18## Magma colors
19
20```{r}
21image(volcano, col = viridis(200, option = "A"))
22```
23
```

The RStudio interface includes the 'Environment', 'History', 'Build', and 'Git' tabs in the top menu bar. The 'Files', 'Plots', 'Packages', 'Help', and 'Viewer' tabs are visible in the bottom navigation bar. The status bar at the bottom shows '1:1' and 'Viridis Demo'. The 'Console' tab is also visible.

# Rendering in R

```
library(rmarkdown)
render("foo.Rmd")
```

# Session information

```
devtools::session_info()
```

# Rmarkdown lab

<https://bit.ly/1LRk3ds>

## Overview

Declaring Parameters

YAML Params Field

Parameter Types

Using Parameters

Accessing from R

Passing Parameters

Parameter User Interfaces

# Parameterized Reports

## Overview

R Markdown documents can optionally include one or more parameters. Parameters are useful when you want to re-render the same report with distinct values for various key inputs, for example:

1. Running a report specific to a department or geographic region.
2. Running a report that covers a specific period in time.
3. Running multiple versions of a report for distinct sets of core assumptions.

R Markdown parameter names, types, and default values are declared in the YAML section at the top of the document.

To change these values for a given rendering you use the `params` argument to the `rmarkdown::render` function.

Note that parameterized reports are a new feature of R Markdown and therefore require very recent versions of the **knitr** (v1.11) and **rmarkdown** (v0.8) packages. You can install the most up to date versions with the following command:

[http://rmarkdown.rstudio.com/developer\\_parameterized\\_reports.html](http://rmarkdown.rstudio.com/developer_parameterized_reports.html)

# Set parameters in yaml

---

```
title: My Document
output: html_document
params:
 region: east
```

---

# Can set any R type if you use !r before expression

---

```
title: My Document
output: html_document
params:
 start: !r as.Date("2015-01-01")
```

---

## Accessing the parameters

params\$region

params\$start

Barely scratching the surface

# rmarkdown

---

```
title: "My awesome website"
```

```
output:
```

```
 html_document:
```

```
 toc: true
```

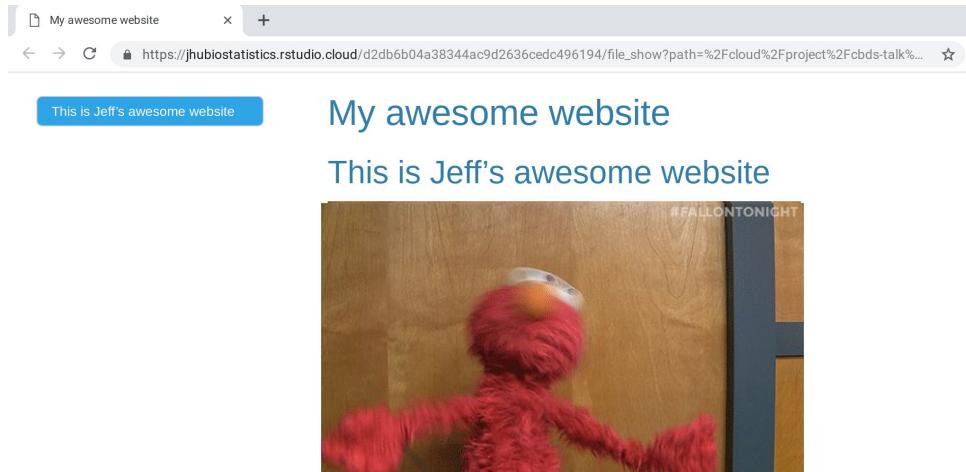
```
 toc_float: true
```

```
 theme: cerulean
```

---

```
This is Jeff's awesome website
```

```
![] (https://media.giphy.com/media/d
rXGoW1iudhKw/giphy.gif)
```



# flexdashboard

```
--
title: "How does your BMI measure up?"
output: flexdashboard::flex_dashboard
runtime: shiny

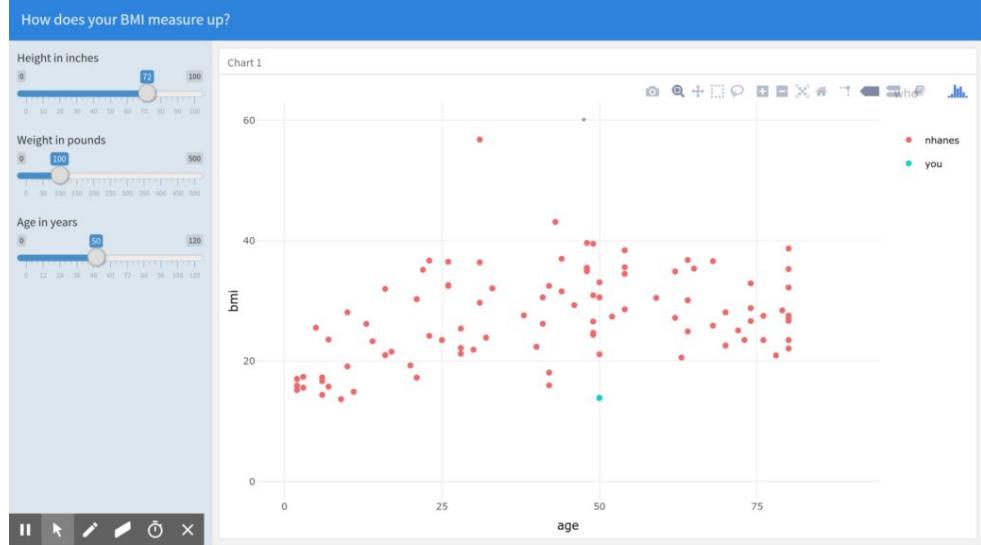
Inputs {.sidebar}

```{r}  
library(flexdashboard); library(NHANES); library(plotly);library(dplyr)  
sliderInput("height", "Height in inches",0,100,72)  
sliderInput("weight", "Weight in pounds",0,500,100)  
sliderInput("age", "Age in years",0,120,50)  
```  

Column

Chart 1

```{r}  
nhanes = sample_n(NHANES,100)  
renderPlotly({  
  df = data.frame(bmi = c(nhanes$BMI,input$weight*0.45/(input$height*0.025)^2),  
                 age = c(nhanes$Age,input$age),  
                 who = c(rep("nhanes",100),"you"))  
  ggplotly(ggplot(df) +  
    geom_point(aes(x=age,y=bmi,color=who)) +  
    scale_x_continuous(limits=c(0,90)) +  
    scale_y_continuous(limits=c(0,60)) +  
    theme_minimal()  
)  
})  
```
```



Downloading data  
reproducibly

## Finding and creating files

```
file.exists("data")
```

```
dir.create("data")
```

```
list.files("data")
```

## Putting it together

```
if (!file.exists("data")) {
 dir.create("data")
}
```

## Finding and creating files

```
file.exists("data")
```

```
dir.create("data")
```

```
list.files("data")
```

```
fileUrl <-
"https://data.baltimorecity.gov/api/views/dz54-2aru/rows.csv?accessType=DOWNLOAD"

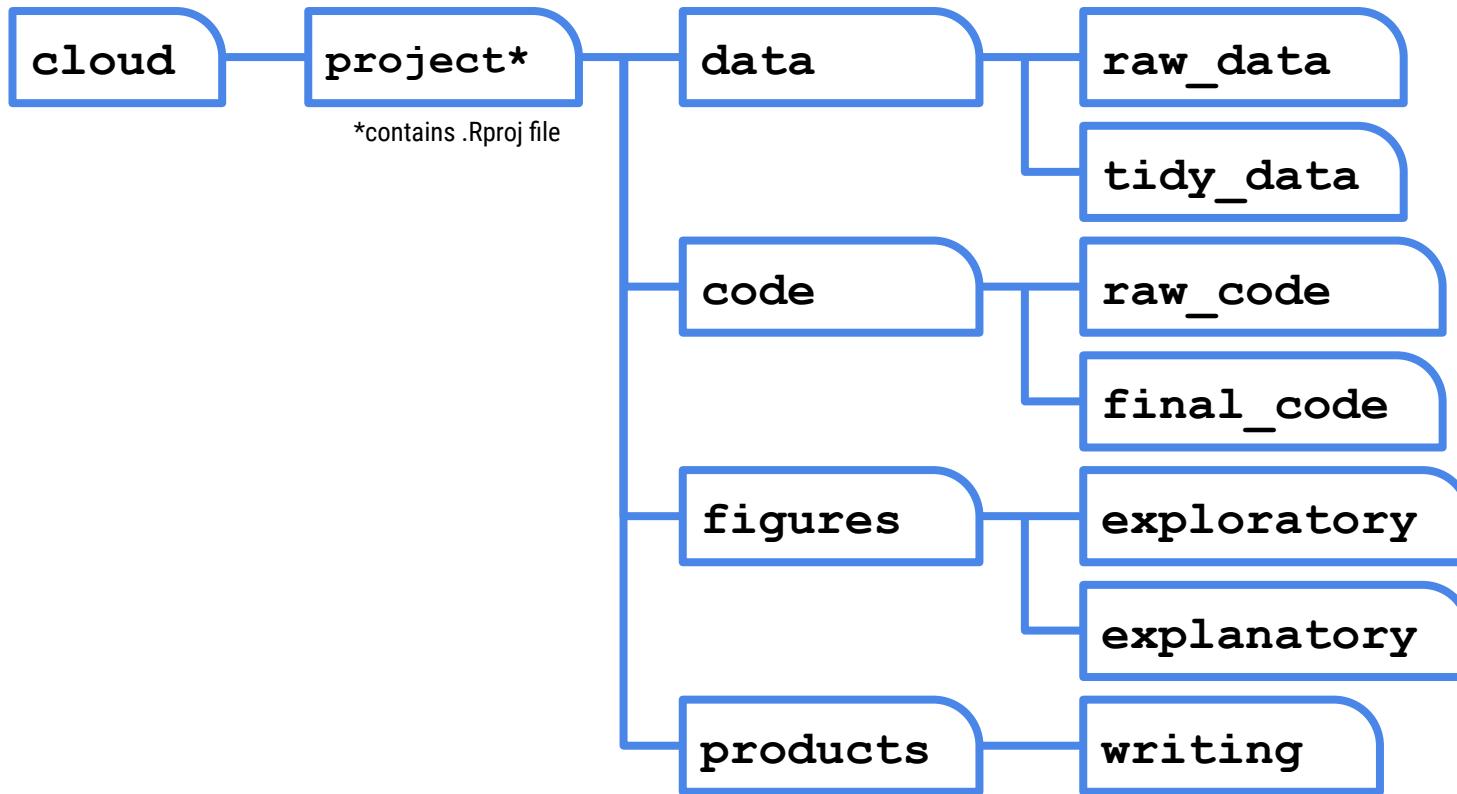
download.file(fileUrl,
 destfile=".~/data/cameras.csv",
 method="curl")

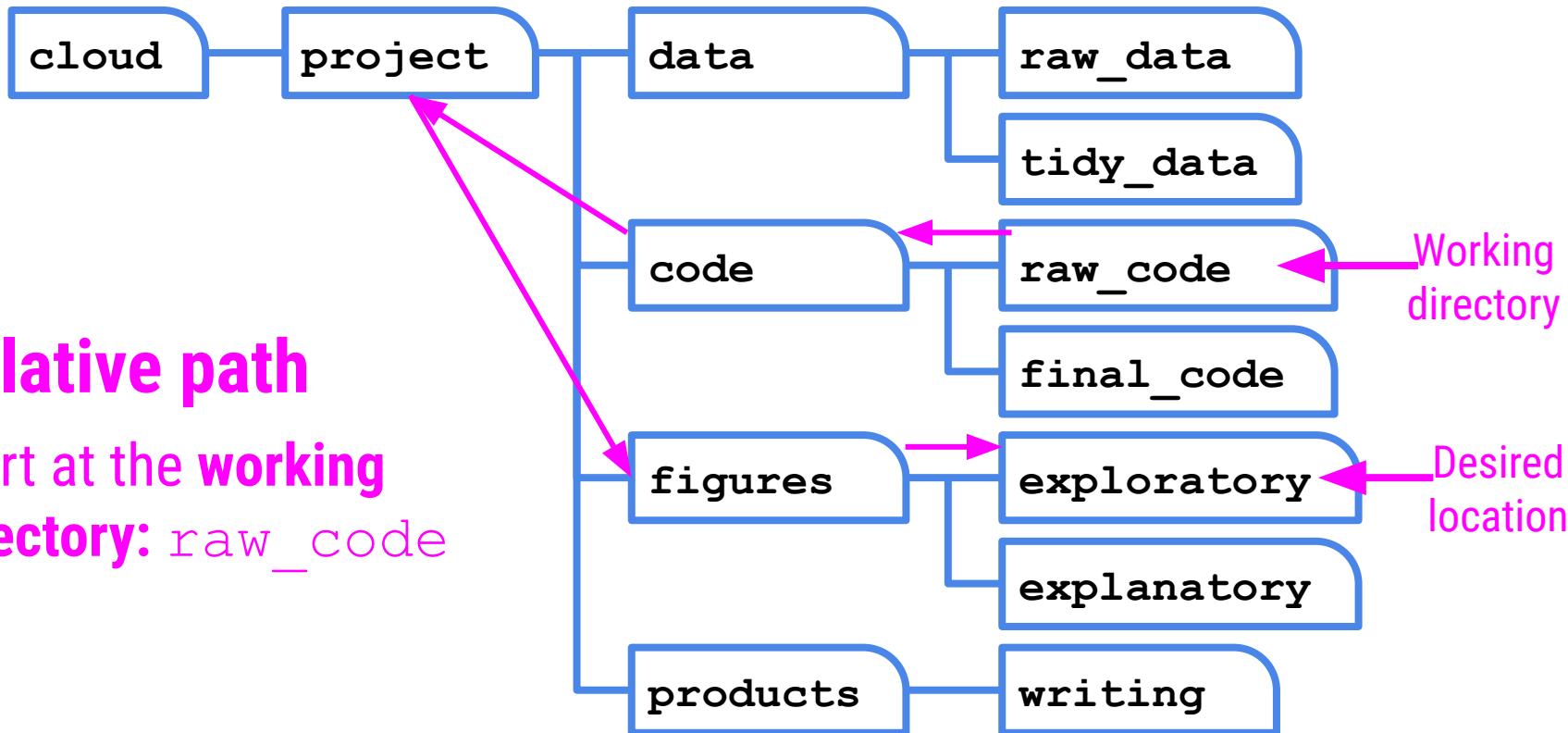
list.files(".~/data")

dateDownloaded <- date()

dateDownloaded
```

# Relative and absolute paths

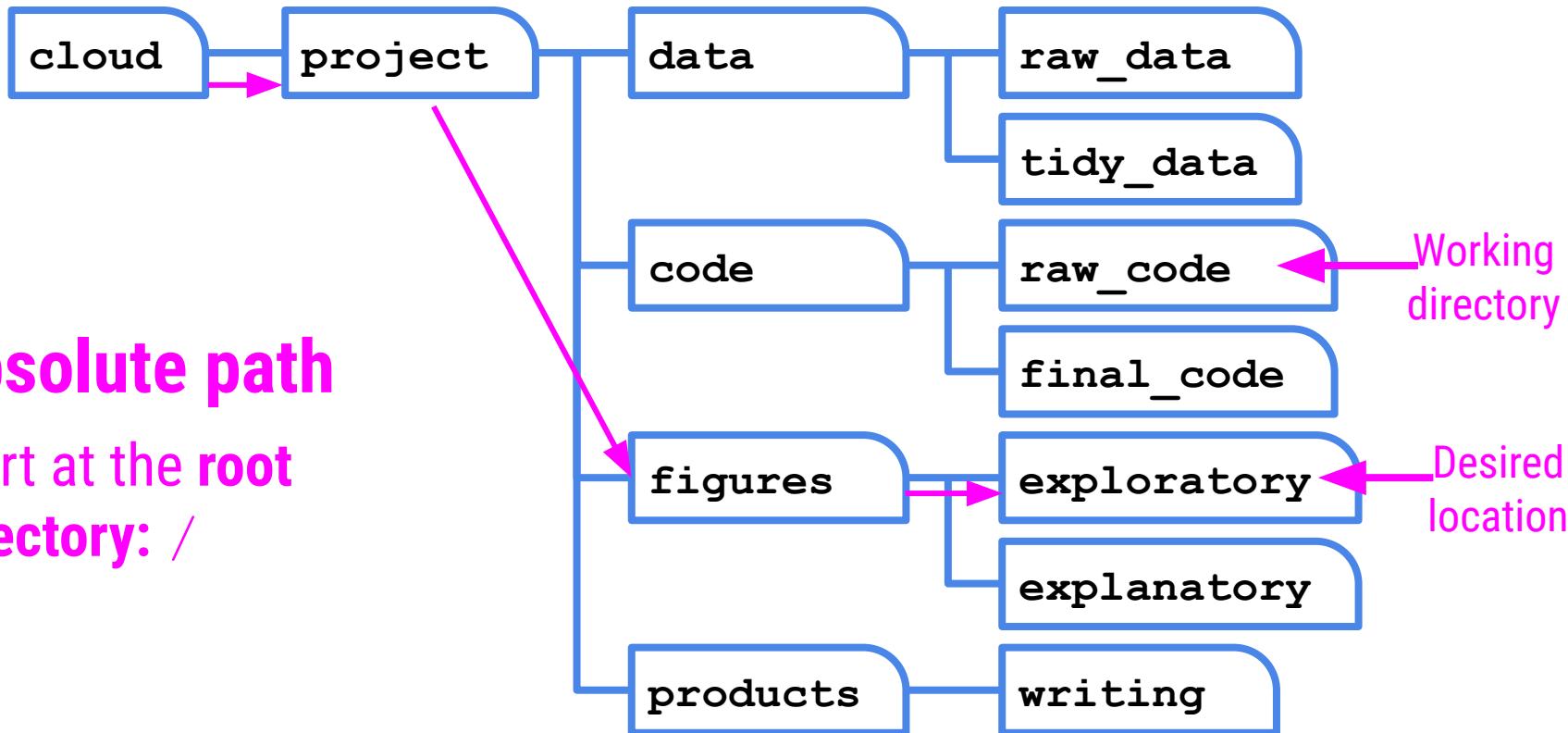




## Relative path

Start at the **working directory**: `raw_code`

To specify this *relative path*: `../../figures/exploratory`



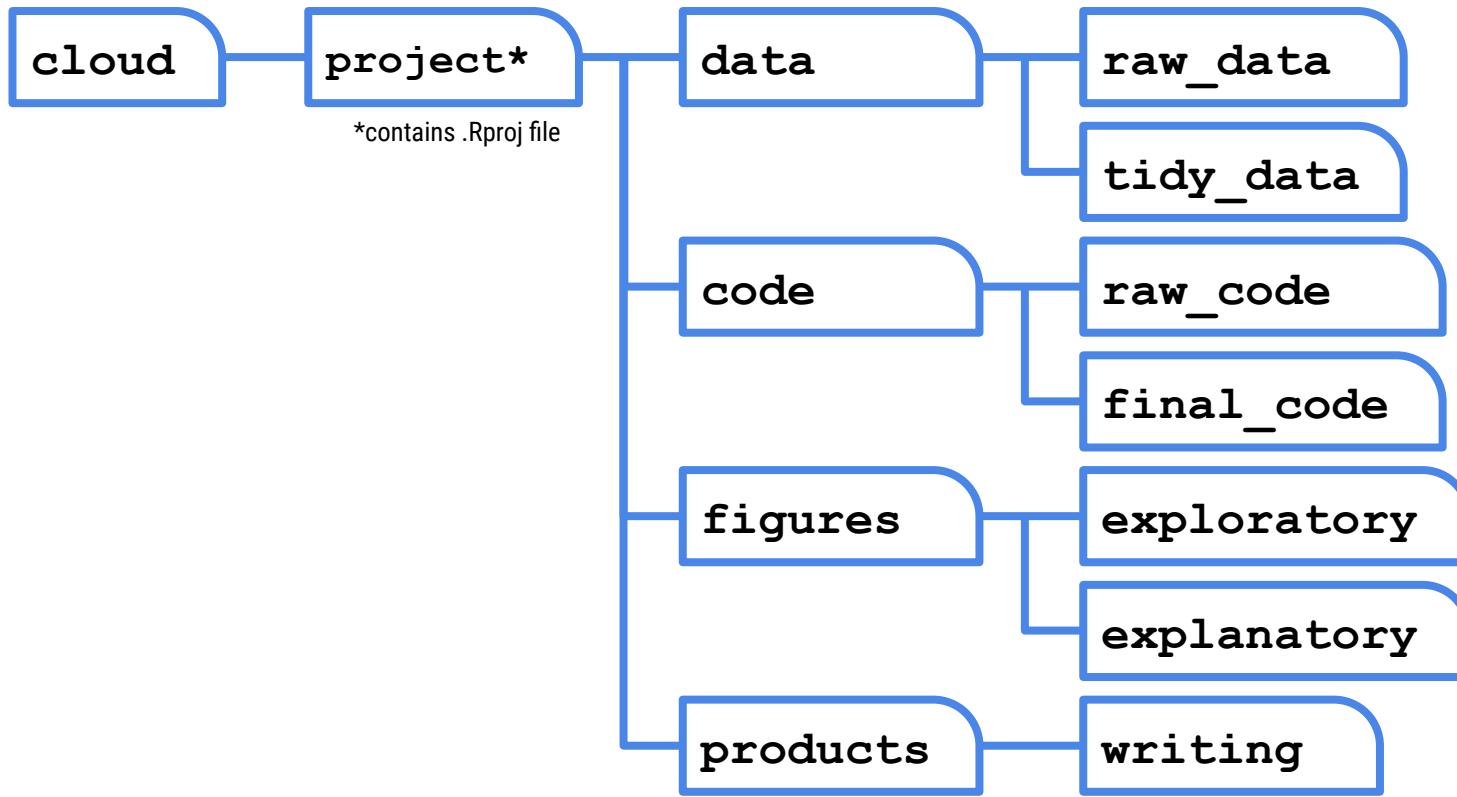
To specify this *absolute* path: /cloud/project/figures/exloratory/

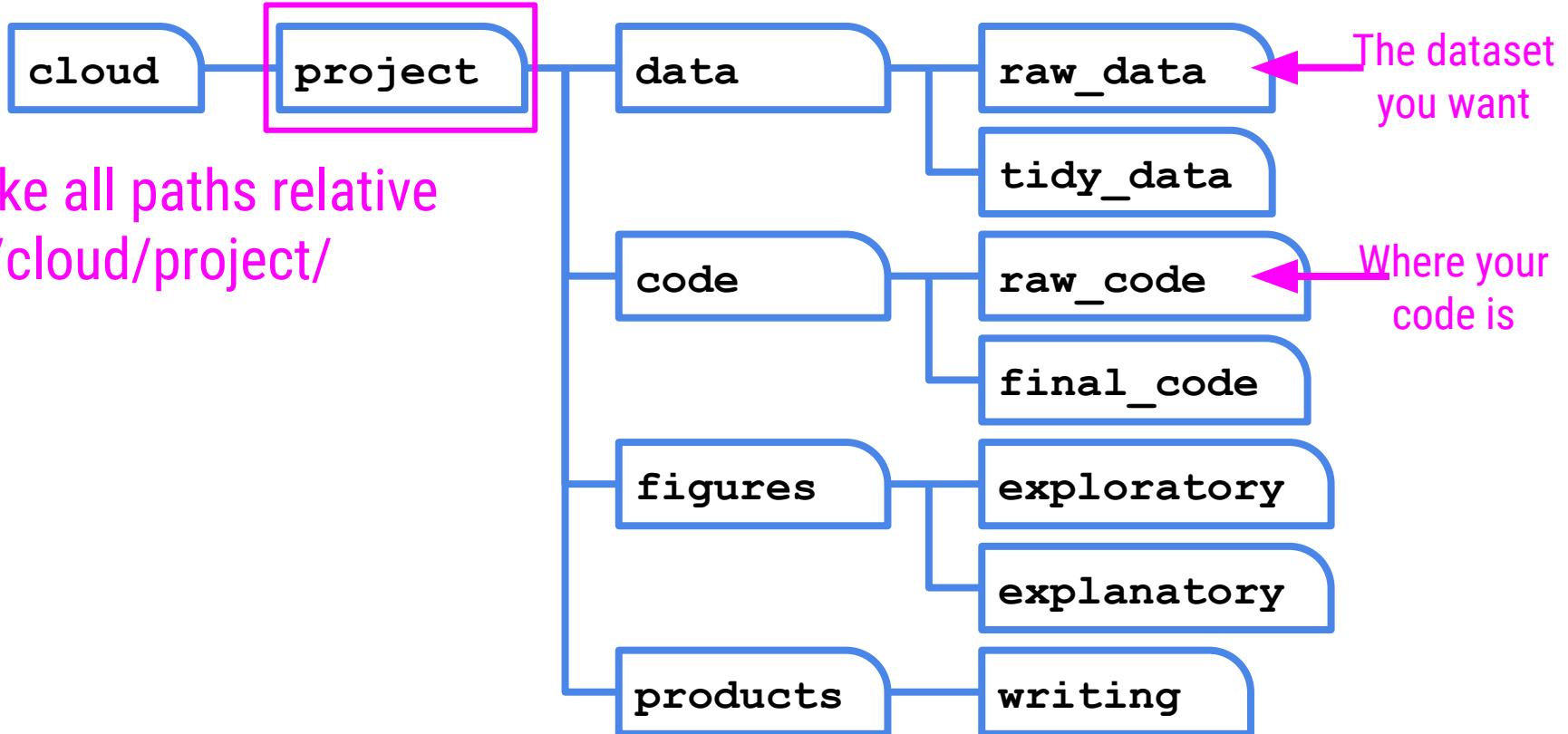
|                          | In the Terminal | In town     |
|--------------------------|-----------------|-------------|
| <b>Root directory</b>    | /               | Town square |
| <b>Working directory</b> | raw_code        | Library     |
| <b>Destination</b>       | exploratory     | Bakery      |

**Absolute path:** “We’re at the library but pretend you are at the town square. Turn left, then right.”

**Relative path:** “Turn right, then right again.”

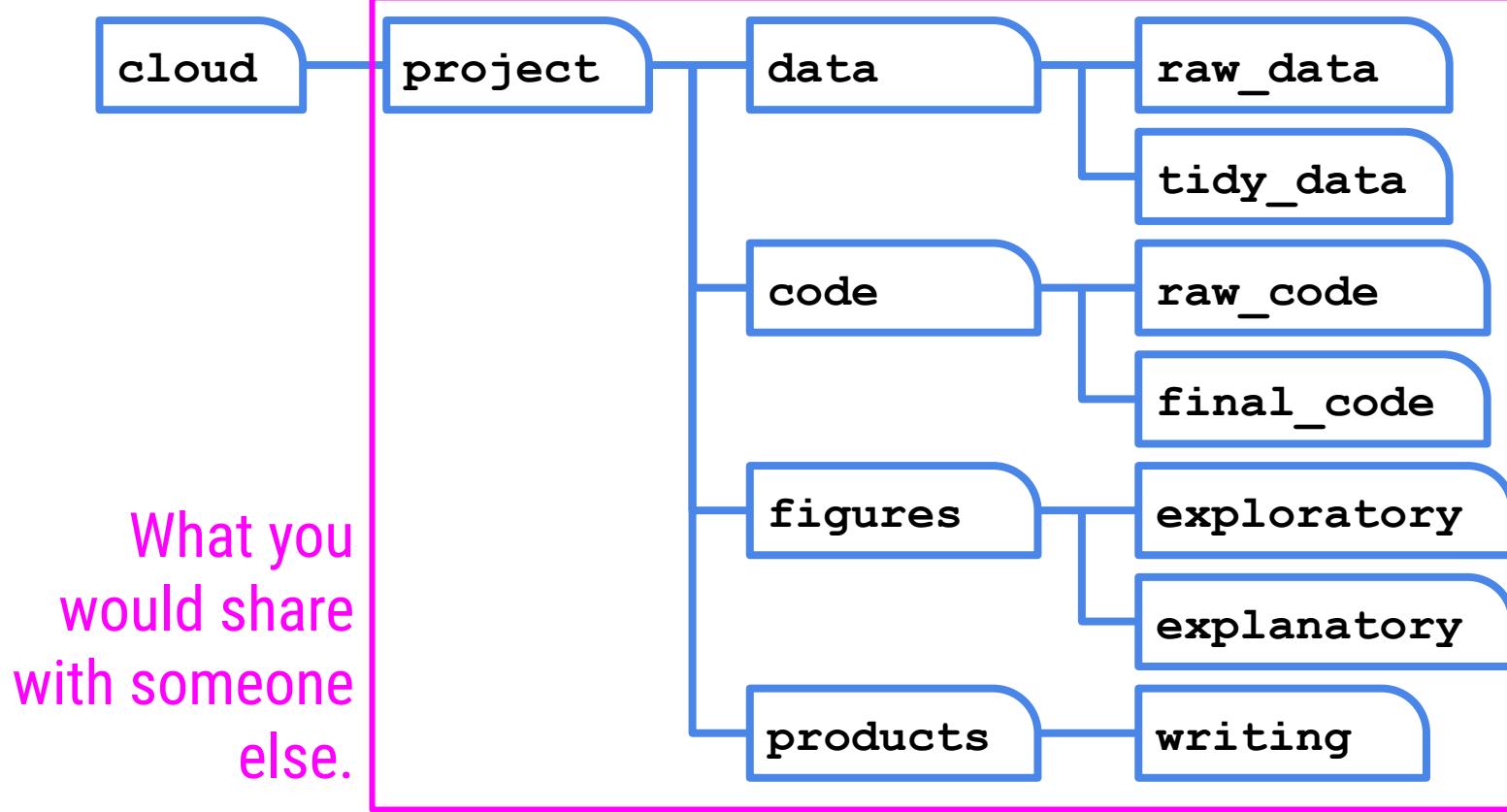






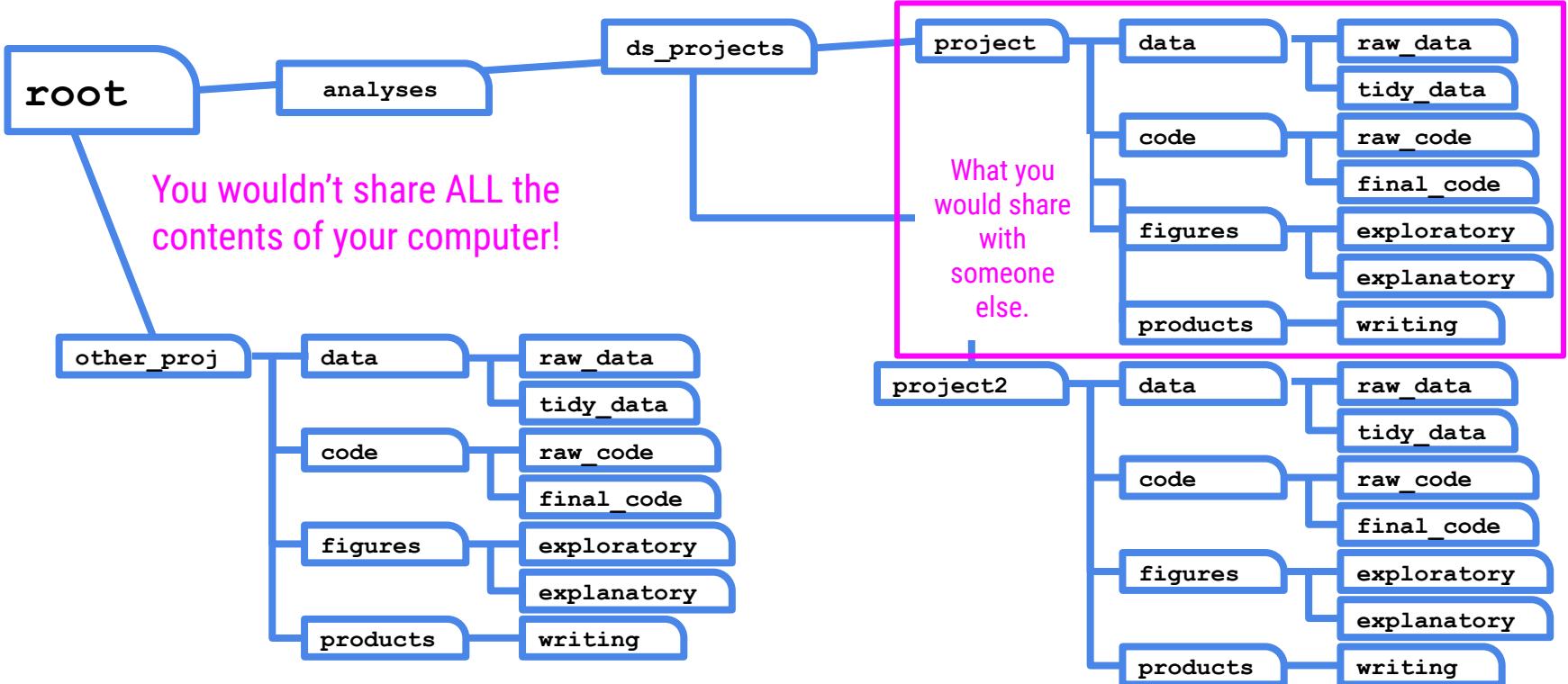
Make all paths relative  
to /cloud/project/

To specify relative path to raw\_data: data/raw\_data/dataset.csv



What you  
would share  
with someone  
else.

All paths in your code should be relative to `/cloud/project` !



Absolute paths like `/root/analyses/ds_projects/project/` wouldn't make sense on someone else's computer !

The screenshot shows the RStudio interface with three main panes:

- Console** (left): Displays R code and its output. A pink box highlights the command `library(here)` and its result [1] "/cloud/project".
- Environment** (top right): Shows the Global Environment pane with the message "Environment is empty".
- File Browser** (bottom right): Shows the contents of a project directory. A pink box highlights the ".Rproj" file.

A large pink arrow points from the highlighted `.Rproj` file in the file browser back to the highlighted `library(here)` command in the console, indicating that the `here()` function is used to find the project's base directory.

here () defines your base directory to be the directory where you have a .Rproj file



The screenshot shows the RStudio interface with three main panes:

- Console** (left pane): Displays R code and its output. A pink box highlights the first few lines of code:

```
> library(here)
>
> getwd()
[1] "/cloud/project"
>
> here()
[1] "/cloud/project"
>
> setwd("/cloud/project/code")
>
> getwd()
[1] "/cloud/project/code"
>
> here()
[1] "/cloud/project"
```
- Environment** (top right pane): Shows the global environment. It displays a message: "Environment is empty".
- Files** (bottom right pane): Shows the project directory structure. The contents of the "code" folder are listed:

| Name          | Size  | Modified               |
|---------------|-------|------------------------|
| ..            |       |                        |
| .Rhistory     | 0 B   | May 17, 2018, 12:15 PM |
| code          |       |                        |
| data          |       |                        |
| figures       |       |                        |
| products      |       |                        |
| project.Rproj | 205 B | May 17, 2018, 12:15 PM |



## Console Terminal

```
/cloud/project/
> library(here)
>
> getwd()
[1] "/cloud/project"
>
> here()
[1] "/cloud/project"
>
> here("code", "raw_code", "intro_code.R")
[1] "/cloud/project/code/raw_code/intro_code.R"
>
```

here () gets you the path to this file!

## Environment History Connections

Import Dataset

Global Environment

Environment is empty

## Files Plots Packages Help Viewer

New Folder Upload Delete Rename More

| Name         | Size | Modified               |
|--------------|------|------------------------|
| ..           |      |                        |
| intro_code.R | 12 B | May 17, 2018, 12:32 PM |

# Version control

# Unfortunate truth

<https://twitter.com/mtrc/status/617075570761965568>



**Michael Cook**  
@mtrc

 Follow

"Version control is a truly vital concept that has  
unfortunately been implemented by madmen." Amen.  
[twitter.com/Pentadact/stat...](https://twitter.com/Pentadact/status/617075570761965568)

5:00 PM - 3 Jul 2015



↑↓ 9

★ 11

- Github - where the cool nerds are
- Bitbucket - where the real nerds are
- svn - where the old nerds are
- Files on your desktop - where the frustrated nerds are



# git

--fast-version-control



Search entire site...

## About

## Documentation

## Blog

## Downloads

GUI Clients

Logos

## Community

The entire [Pro Git book](#) written by Scott Chacon and Ben Straub is available to [read online for free](#). Dead tree versions are available on [Amazon.com](#).

# Downloads



Mac OS X



Windows



Linux



Solaris

Older releases are available and the [Git source repository](#) is on GitHub.

## GUI Clients

Git comes with built-in GUI tools (`git-gui`, `gitk`), but there are several third-party tools for users looking for a platform-specific experience.

[View GUI Clients →](#)

Latest source Release

**2.4.5**

Release Notes (2015-06-25)

Downloads for Mac



## Logos

Various Git logos in PNG (bitmap) and EPS (vector) formats are available for use in online and print projects.

[View Logos →](#)

GitHub · Build software better

GitHub, Inc. [US] https://github.com

GitHub Search GitHub Explore Features Enterprise Blog Sign up Sign in

# Build software better, together.

Powerful collaboration, code review, and code management for open source and private projects. Need private repositories? Upgraded plans start at \$7/mo.

Pick a username

Your email

Create a password

Use at least one lowercase letter, one numeral, and seven characters.

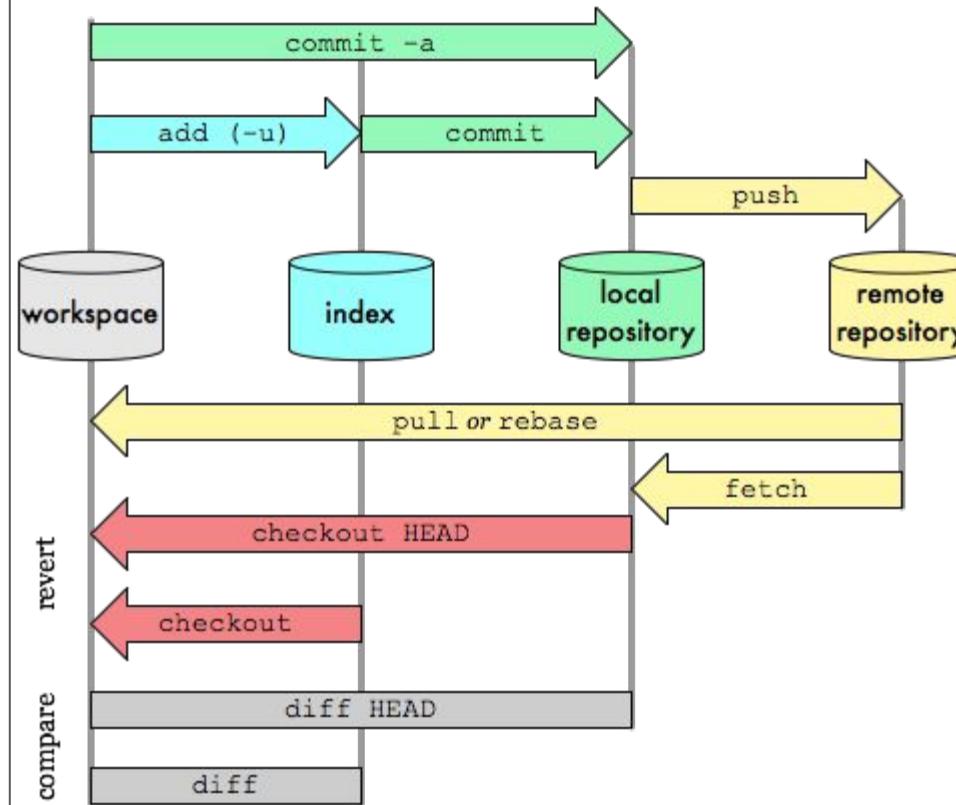
Sign up for GitHub

By clicking "Sign up for GitHub", you agree to our [terms of service](#) and [privacy policy](#). We will send you account related emails occasionally.

The image shows the GitHub homepage. The main headline reads "Build software better, together." Below it, there's a sub-headline: "Powerful collaboration, code review, and code management for open source and private projects. Need private repositories? Upgraded plans start at \$7/mo." To the right of the main content, there's a large sign-up form with three input fields: "Pick a username", "Your email", and "Create a password". Below these fields is a note: "Use at least one lowercase letter, one numeral, and seven characters." A prominent green button labeled "Sign up for GitHub" is located below the password field. At the bottom of the sign-up form, there's a small note: "By clicking "Sign up for GitHub", you agree to our [terms of service](#) and [privacy policy](#). We will send you account related emails occasionally." The GitHub logo is at the top left, and the navigation bar includes links for Explore, Features, Enterprise, and Blog, along with Sign up and Sign in buttons.

# Git Data Transport Commands

<http://ostealee.com>



# Basic use

- ▶ Change some files
- ▶ See what you've changed

```
git status
git diff
git log
```

- ▶ Indicate what changes to save

```
git add
```

- ▶ Commit to those changes

```
git commit
```

- ▶ Push the changes to GitHub

```
git push
```

- ▶ Pull changes from your collaborator

```
git pull
```

# Nice practice

<https://www.katacoda.com/courses/git>

# Why not just use Dropbox?

Commits · jtleek/jtleek.github.io

GitHub, Inc. [US] https://github.com/jtleek/jtleek.github.io/commits/master?page=2

Apps Inbox Simply Statistics simplystats Google Scholar Google Music datastyle Biostat-spreadsheet

jtleek committed on May 8, 2015

**updated papers with rail**  
jtleek committed on May 8, 2015

Commits on May 4, 2015

**Merge pull request #14 from hammer/patch-1**  
jtleek committed on May 4, 2015

**Fix typo on papers.md**  
hammer committed on May 4, 2015

Commits on May 1, 2015

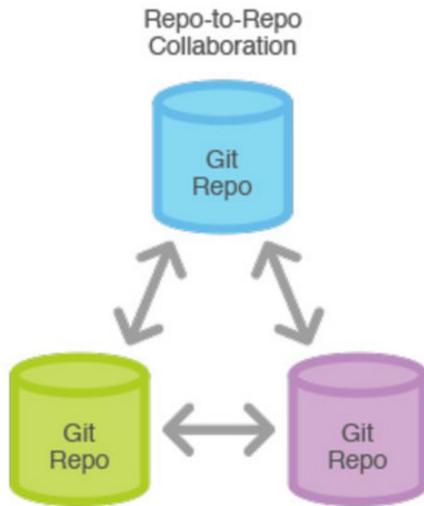
**regionr eport paper**  
jtleek committed on May 1, 2015

Commits on Apr 30, 2015

**added boosting lecture**  
jtleek committed on Apr 30, 2015

**polyester paper**  
jtleek committed on Apr 30, 2015

## possible, in theory



## more typical

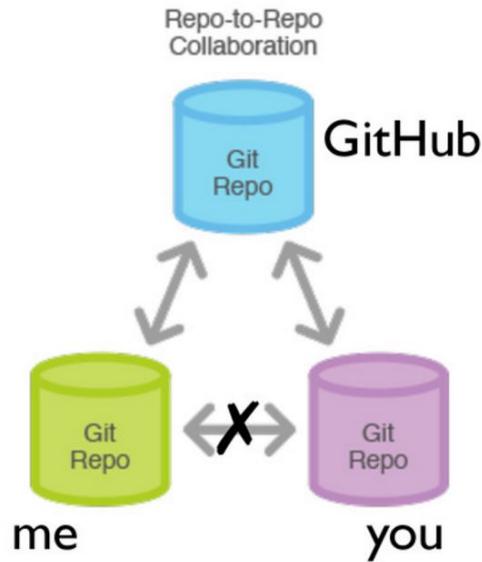


Image from <https://www.atlassian.com/git/tutorial/git-basics#!clone>



*There are no bad ideas, Lemon. Only  
good ideas that go horribly wrong.*



## SISBID / Module1

[Watch 2](#)[Star 2](#)[Fork 5](#)

Teaching material for Summer Institute in Statistics for Big Data Module 1.

[27 commits](#)[2 branches](#)[0 releases](#)[3 contributors](#)[branch: gh-pages](#) ▾[Module1 / +](#)[Add compiled html](#)[raphg authored 18 hours ago](#)[latest commit f715046bcf](#) [lecture\\_notes](#)[Added installation script and set up instructions](#)[18 hours ago](#)[.gitignore](#)[First commit for lecture notes](#)[27 days ago](#)[.nojekyll](#)[updated license, added webpage](#)[5 days ago](#)[LICENSE](#)[updated license, added webpage](#)[5 days ago](#)[README.md](#)[Fixed typo and links](#)[18 hours ago](#)[SISBD.Rproj](#)[First commit for lecture notes](#)[27 days ago](#)[getting\\_started.md](#)[Added installation script and set up instructions](#)[18 hours ago](#)[index.Rmd](#)[Fixed typo and links](#)[18 hours ago](#)

m

[Code](#)[Issues 0](#)[Pull requests 0](#)[Pulse](#)[Graphs](#)[HTTPS clone URL](#)<https://github.com/>

You can clone with [HTTPS](#) or  
[Subversion](#).

[Clone in Desktop](#)[Download ZIP](#)

# GitHub = a place to host Git repositories on the web

## GitHub ≠ Git

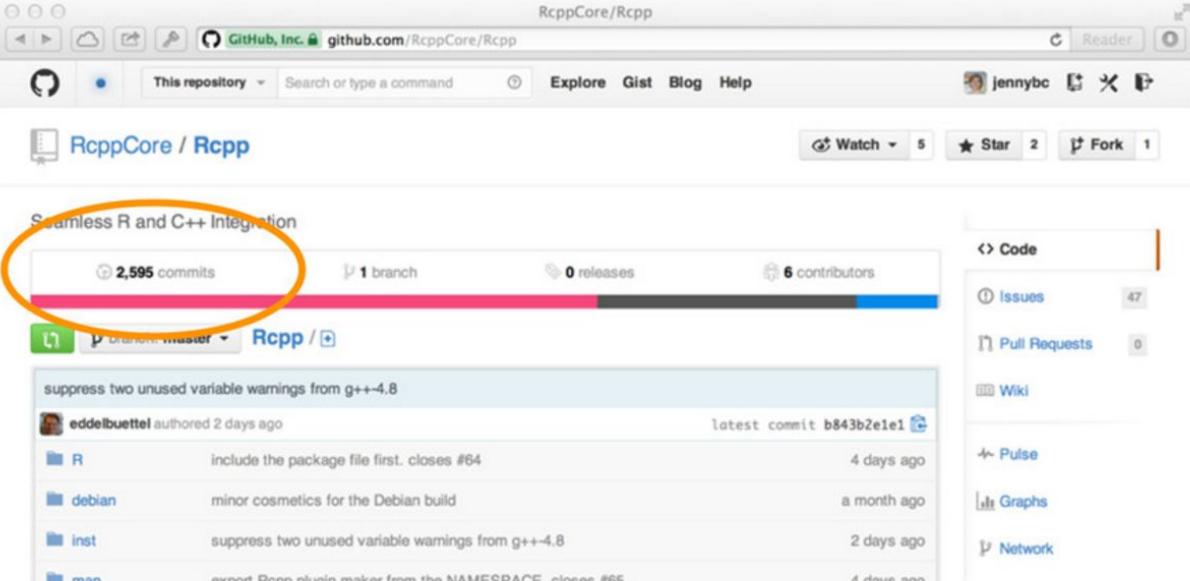
The screenshot shows the GitHub interface for the repository `RcppCore/Rcpp`. The top navigation bar includes links for `RcppCore/Rcpp`, `Explore`, `Gist`, `Blog`, and `Help`. On the right, there are user profile icons for `jennybc` and various repository stats: 5 stars, 1 fork, and 1 pull request. The main content area displays the repository's name, `RcppCore / Rcpp`, and a summary: 2,595 commits, 1 branch, 0 releases, and 6 contributors. A dropdown menu shows the current branch is `master`. Below this is a list of recent commits by `eddelbuettel`, with the latest commit being `b843b2e1e1`. The commit list includes:

- suppress two unused variable warnings from g++-4.8 (2 days ago)
- include the package file first. closes #64 (4 days ago)
- minor cosmetics for the Debian build (a month ago)
- suppress two unused variable warnings from g++-4.8 (2 days ago)
- export Rcpp.plugin.maker from the NAMESPACE. closes #65 (4 days ago)
- mark functions as registered and make sure they don't throw. closes #73 (3 days ago)
- fix R CMD check not finding sourceCpp files (a year ago)
- correct use of href (3 days ago)
- added travis.yml to enable continuous integration on github (23 days ago)
- added to exclude inst/doc/{Makefile,jss.bst} from making it into the ... (2 years ago)
- ignoring inst/lib (20 days ago)

On the right side, there is a sidebar titled "Code" containing links for `Issues` (47), `Pull Requests` (0), `Wiki`, `Pulse`, `Graphs`, and `Network`. At the bottom, there is a section for cloning the repository with options for `HTTPS clone URL`, `Clone in Desktop`, and `Download ZIP`.

Jenny Bryan:<https://speakerdeck.com/jennybc/ubc-stat545-2015-cm001-intro-to-course>

You can see exactly how files have changed, when, and by whom. If commit message is good, you'll see why.  
Commit = a formal “checkpoint” or snapshot of the state of the repository



The screenshot shows the GitHub interface for the RcppCore/Rcpp repository. At the top, there's a navigation bar with icons for back, forward, search, and user profile (jennybc). The URL is github.com/RcppCore/Rcpp. Below the bar, there are buttons for 'Explore', 'Gist', 'Blog', and 'Help'. On the right, there are links for 'Reader', 'jennybc', and account settings. The main title is 'RcppCore / Rcpp'. To the right of the title are buttons for 'Watch' (5), 'Star' (2), and 'Fork' (1). A sidebar on the right contains sections for 'Code', 'Issues' (47), 'Pull Requests' (0), 'Wiki', 'Pulse', 'Graphs', and 'Network'. The main content area shows a summary bar with '2,595 commits' (circled in yellow), '1 branch', '0 releases', and '6 contributors'. Below this is a list of recent commits:

- suppress two unused variable warnings from g++-4.8 (latest commit b843b2e1e1)
- R include the package file first. closes #64 (4 days ago)
- debian minor cosmetics for the Debian build (a month ago)
- inst suppress two unused variable warnings from g++-4.8 (2 days ago)
- man export Rcpp.plugin.maker from the NAMESPACE. closes #65 (4 days ago)

Jenny Bryan:<https://speakerdeck.com/jennybc/ubc-stat545-2015-cm001-intro-to-course>



Jenny Bryan  
@JennyBryan



Following

I have my own ideas about what makes a good commit message.

📄 .travis.yml

if this works, it will be a miracle

RETWEETS

7

LIKES

28



2:54 AM - 11 Jul 2016



7



28

...

<https://twitter.com/JennyBryan/status/752440799149846528>

# Install Git/Github Locally (for later)

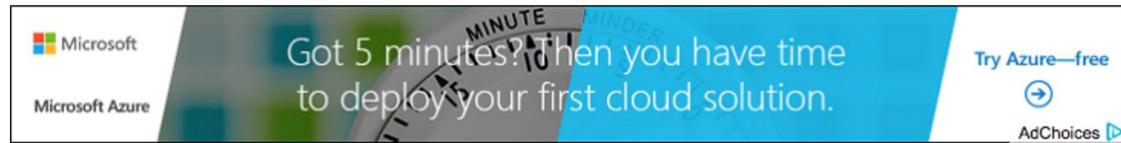
<http://happygitwithr.com/install-git.html>

and

<https://try.github.io/levels/1/challenges/1>

# How the pros git/github

## How to keep the local file or the remote file during merge using Git and the command line?



asked 5 years ago

viewed 31361 times

active 17 days ago

I know how to merge modification using vimdiff, but, assuming I just know that the entire file is good to keep or to throw away, how do I do that?

75

I don't want to open vimdiff for each of them, I change want a command that says 'keep local' or 'keep remote'.

33

E.G: I got a merge with files marked as changed because somebody opened it under windows, changing the EOL, and then committed. When merging, I want to just keep my own version and discard his.

I'm also interested in the contrary: I screwed up big time and want to accept the remote file, discarding my changes.

[git](#) [merge](#) [local](#)

[share](#) [improve this question](#)

asked Jul 11 '11 at 12:41



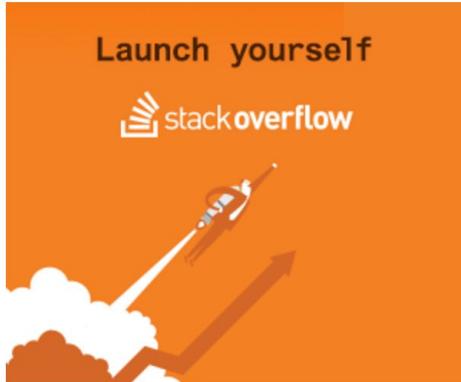
e-satis

238k • 82 • 228 • 285

[add a comment](#)

4 Answers

active oldest votes



Reload th

The amount of Git skilz  
necessary to fix a borked repo is  
an order of magnitude bigger  
than to bork it.

<https://github.com/jennybc/happy-git-and-github-for-the-user/blob/master/happy-git-and-github-for-the-user.pdf>



# BURN IT ALL DOWN

<https://github.com/jennybc/happy-git-and-github-for-the-user/blob/master/happy-git-and-github-for-the-user.pdf>



Search GitHub

Pull requests Issues Marketplace Explore



JaneEverydayDoe ▾

Browse activity

Discover repositories



You've been added to the **jhudsl** organization!

Here are some quick tips for a first-time organization member.

- Use the switch context button in the upper left corner of this page to switch between your personal context (JaneEverydayDoe) and organizations you are a member of.
- After you switch contexts you'll see an organization-focused dashboard that lists out organization repositories and activities.

defunkt ▾

## Discover interesting projects and people to populate your personal news feed.

Your news feed helps you keep up with recent activity on repositories you [watch](#) and people you [follow](#).

[Explore GitHub](#)

Custom domains on GitHub Pages X  
**gain support for HTTPS**

Custom domains on GitHub Pages gain support for HTTPS.

[View new broadcasts](#)

Repositories you contribute to 1

[jhudsl/example\\_github\\_repository...](#) 0 ★

Your repositories 5

[New repository](#)

Find a repository...

All Public Private Sources Forks

[Temporary\\_add\\_to\\_version\\_control](#)

[first\\_project](#)

[janeeverydaydoe.github.com](#)

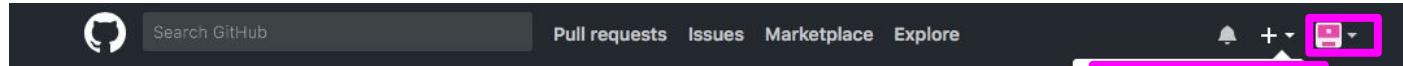
[hello-world](#)

[jhudsl/example\\_github\\_repository](#)

Your teams 1

Find a team...





JaneEverydayDoe ▾

Browse activity

Discover repositories



You've been added to the jhudsl organization!

Here are some quick tips for a first-time organization member.

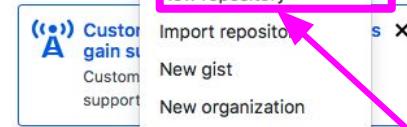
- Use the switch context button in the upper left corner of this page to switch between your personal context (JaneEverydayDoe) and organizations you are a member of.
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defunkt ▾

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[View new broadcasts](#)

### Repositories you contribute to ①

[jhudsl/example\\_github\\_repository...](#) 0 ★

### Your repositories ⑤

[New repository](#)

Find a repository...

All Public Private Sources Forks

[Temporary\\_add\\_to\\_version\\_control](#)

[first\\_project](#)

[janeeverydaydoe.github.com](#)

[hello-world](#)

[jhudsl/example\\_github\\_repository](#)

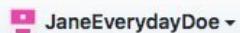
### Your teams ①

Find a team...

## Create a new repository

A repository contains all the files for your project, including the revision history.

Owner



Repository name

JaneEverydayDoe

/ my\_first\_project



Great repository names are short and memorable. Need inspiration? How about [upgraded-guide](#).

Description (optional)

My first project files



Public

Anyone can see this repository. You choose who can commit.



Private

You choose who can see and commit to this repository.

Initialize this repository with a README

This will let you immediately clone the repository to your computer. Skip this step if you're importing an existing repository.

Add .gitignore: **None** ▾

Add a license: **None** ▾



**Create repository**

[Code](#)[Issues 0](#)[Pull requests 0](#)[Projects 0](#)[Wiki](#)[Insights](#)[Settings](#)

## My first project files

[Edit](#)[Add topics](#)

1 commit

1 branch

0 releases

1 contributor

Branch: master ▾

[New pull request](#)[Create new file](#)[Upload files](#)[Find file](#)[Clone or download](#)

JaneEverydayDoe Initial commit

README.md

Initial commit

README.md

### Clone with HTTPS ?

[Use SSH](#)

Use Git or checkout with SVN using the web URL.

[https://github.com/JaneEverydayDoe/my\\_fi...](https://github.com/JaneEverydayDoe/my_fi...)[Open in Desktop](#)[Download ZIP](#)

# my\_first\_project

## My first project files

Spaces

Your Workspace

New Space

Info

Learn

Feedback and Questions

Terms and Conditions

## Your Projects

No Projects

1

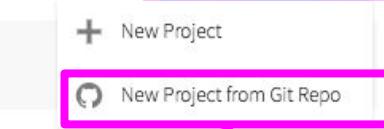
1

New Project

+ New Project

New Project from Git Repo

2



Your Workspace

Projects

Learn



## Your Projects

New Project from Git Repo

New Project



URL of your Git repository

`https://github.com/JaneEverydayDoe/my_first_project.git`

OK

File Edit Code View Plots Session Build Debug Profile Tools Help

+ Go to file/function Addins R 3.4.4

**README.md**

1 # my\_first\_project  
2 My first project files  
3

Environment History Connections Git

Import Dataset Global Environment

Environment is empty

Files Plots Packages Help Viewer

New folder Upload Delete Rename More

/cloud/project/

Name Size Modified

| Name             | Size        | Modified                     |
|------------------|-------------|------------------------------|
| .gitignore       | 40 B        | May 11, 2018, 2:34 PM        |
| .Rhistory        | 0 B         | May 11, 2018, 2:34 PM        |
| project.Rproj    | 205 B       | May 11, 2018, 2:34 PM        |
| <b>README.md</b> | <b>42 B</b> | <b>May 11, 2018, 2:34 PM</b> |

Console Terminal

/cloud/project/

Type 'license()' or 'licence()' for distribution details.

R is a collaborative project with many contributors.  
Type 'contributors()' for more information and  
'citation()' on how to cite R or R packages in publications.

Type 'demo()' for some demos, 'help()' for on-line help, or  
'help.start()' for an HTML browser interface to help.  
Type 'q()' to quit R.

>

The screenshot shows a Jupyter Notebook interface with a single cell containing a Markdown file named README.md. The cell content is as follows:

```
1 # This is the README file for my_first_project
2 The folders in this project are:
3
4 * _data_ - is the folder where you will put all the data you have collected or been given to analyze.
5 * _figures_ - is where you will put plots, data pictures, and other images you have created to show
 data to other people.
6 * _code_ - is where you will create code files for collecting, cleaning up, or analyzing data.
7 * _products_ - this is the place where you will place any reports, presentations, or products you
 create for sharing with other people.
```

```
1 git add .
2 git commit -m "changed readme file"
3 git push
```

```
Counting objects: 3, done.
Delta compression using up to 16 threads.
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 338 bytes | 0 bytes/s, done.
Total 3 (delta 1), reused 0 (delta 0)
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/JaneEverydayDoe/my_first_project.git
 e80844c..24fec16 master -> master
rstudio-user@f128931a1c66:/cloud/projects$
```

---

|                               |             |                |
|-------------------------------|-------------|----------------|
| <a href="#">.gitignore</a>    | sdkfjsldf   | 22 hours ago   |
| <a href="#">README.md</a>     | new changes | 22 seconds ago |
| <a href="#">project.Rproj</a> | sdkfjsldf   | 22 hours ago   |

[README.md](#)

## This is the README file for my\_first\_project

The folders in this project are:

- *data* - is the folder where you will put all the data you have collected or been given to analyze.
- *figures* - is where you will put plots, data pictures, and other images you have created to show data to other people.
- *code* - is where you will create code files for collecting, cleaning up, or analyzing data.
- *products* - this is the place where you will place any reports, presentations, or products you create for sharing with other people.



|                          | Name          | Size  | Modified               |
|--------------------------|---------------|-------|------------------------|
|                          | ..            |       |                        |
| <input type="checkbox"/> | .gitignore    | 40 B  | May 11, 2018, 2:34 PM  |
| <input type="checkbox"/> | .Rhistory     | 0 B   | May 11, 2018, 2:34 PM  |
| <input type="checkbox"/> | project.Rproj | 205 B | May 12, 2018, 12:51 PM |
| <input type="checkbox"/> | README.md     | 201 B | May 12, 2018, 12:52 PM |
| <input type="checkbox"/> | data          |       |                        |
| <input type="checkbox"/> | figures       |       |                        |
| <input type="checkbox"/> | code          |       |                        |
| <input type="checkbox"/> | products      |       |                        |



- \* data/
    - \* raw\_data/
    - \* tidy\_data/
  - \* code/
    - \* raw\_code/
    - \* final\_code/
  - \* figures/
    - \* exploratory\_figures/
    - \* explanatory\_figures/
  - \* products/
    - \* writing/
-

# In this lesson...

---



- You add/edit files on your computer or in your RStudio cloud project (in your **local repository**).
- You want to publish/share these changes to a **remote repository** (GitHub) so that others may see them/incorporate them into their own work.
- Git commands covered
  - status
  - add
  - commit
  - push

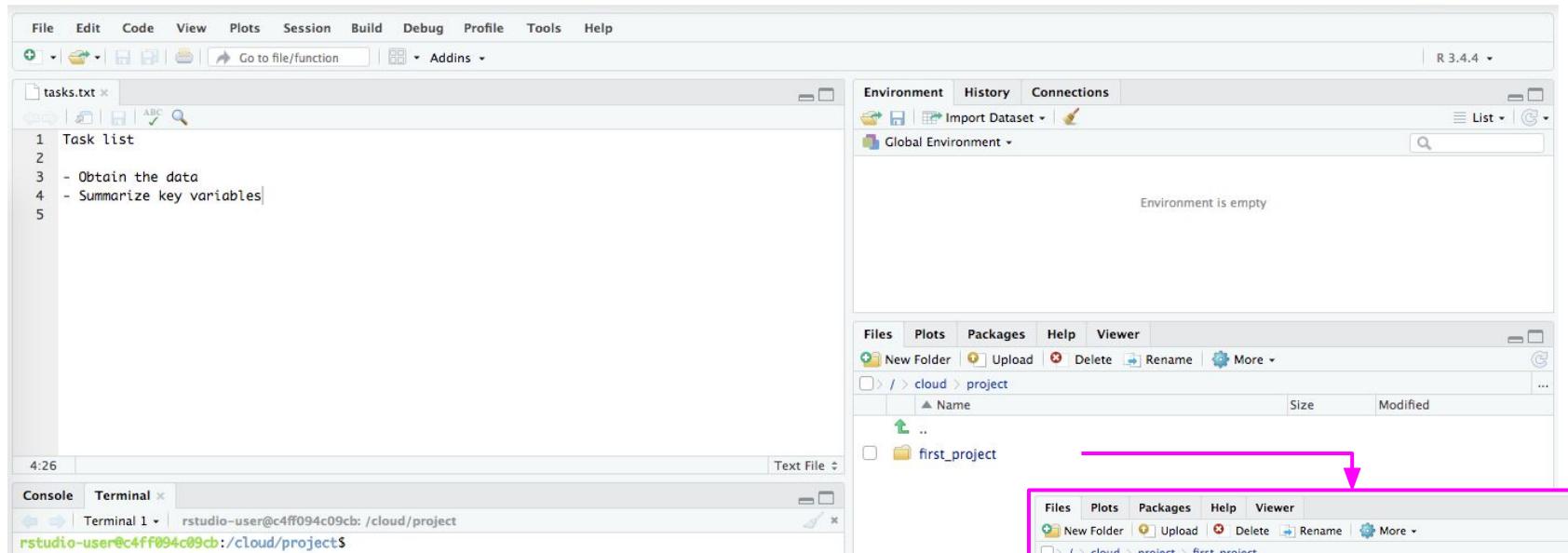
Console Terminal x

rstudio-user@56243c3396f9: /cloud/project/first\_project

```
rstudio-user@56243c3396f9:/cloud/project/first_project$ git status
On branch master
Your branch is up-to-date with 'origin/master'.
nothing to commit, working directory clean
rstudio-user@56243c3396f9:/cloud/project/first_project$
```

---

Creating a file in our project



The screenshot shows the RStudio interface. In the top-left pane, there is a text editor window titled "tasks.txt" containing the following content:

```
1 Task list
2
3 - Obtain the data
4 - Summarize key variables
5
```

In the top-right pane, the "Environment" tab is selected, showing the message "Environment is empty".

Below these panes, there are two "Files" browser windows. The left one shows a folder structure under "cloud > project":

- ..
- first\_project

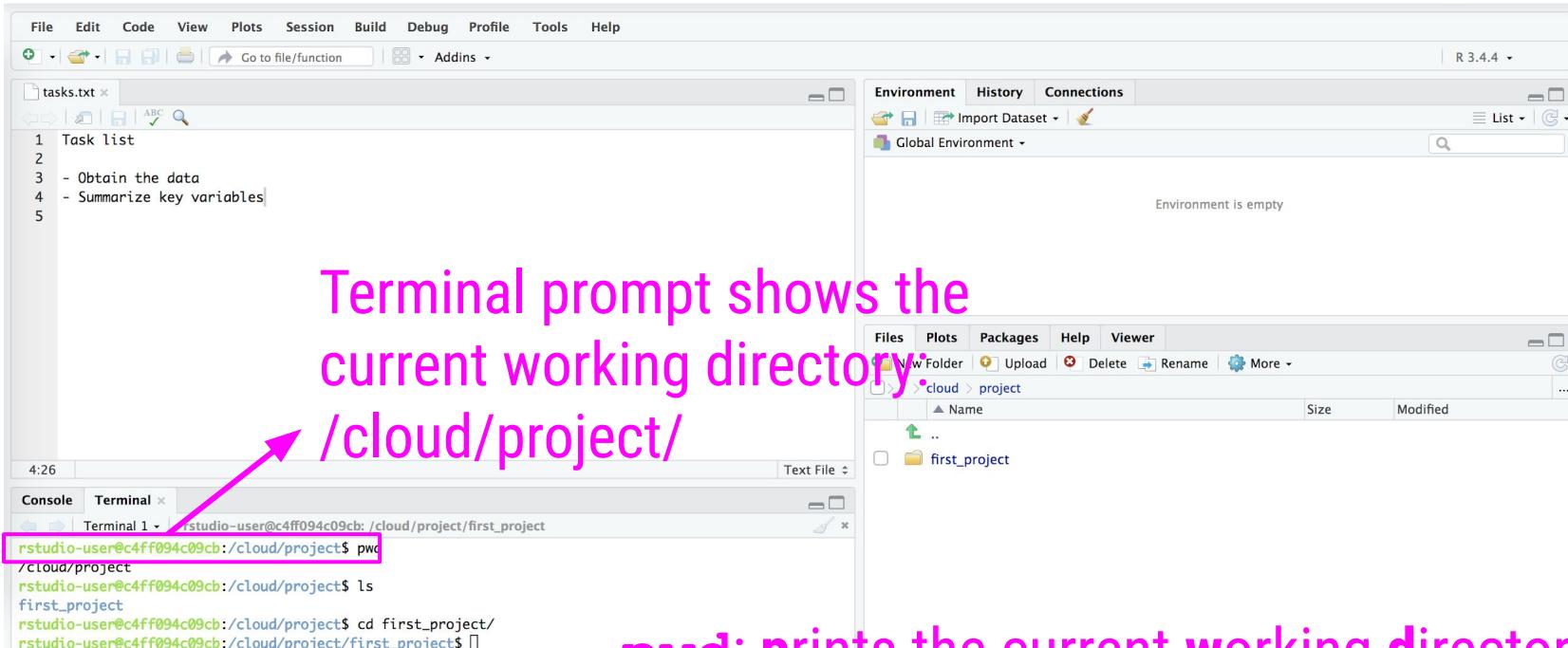
The right one shows the contents of the "first\_project" folder:

| Name      | Size | Modified              |
|-----------|------|-----------------------|
| README.md | 75 B | Apr 20, 2018, 2:50 PM |
| tasks.txt | 55 B | Apr 27, 2018, 9:51 AM |

File > New file > Text file > Save As “tasks.txt”  
within the first\_project folder

---

Creating a file in our project



The screenshot shows the RStudio interface with the following components:

- Top Bar:** File, Edit, Code, View, Plots, Session, Build, Debug, Profile, Tools, Help.
- Code Editor:** A file named "tasks.txt" containing a task list:

```
1 Task list
2
3 - Obtain the data
4 - Summarize key variables
5
```
- Environment Tab:** Shows the Global Environment, which is currently empty.
- File Browser:** Shows a project structure under "/cloud/project":

| Name          | Size | Modified |
|---------------|------|----------|
| ..            |      |          |
| first_project |      |          |
- Terminal Window:** The terminal prompt shows the current working directory: "/cloud/project/first\_project". The user has run the command "pwd" to print the current working directory, "ls" to list files and folders, and "cd first\_project" to change the directory.

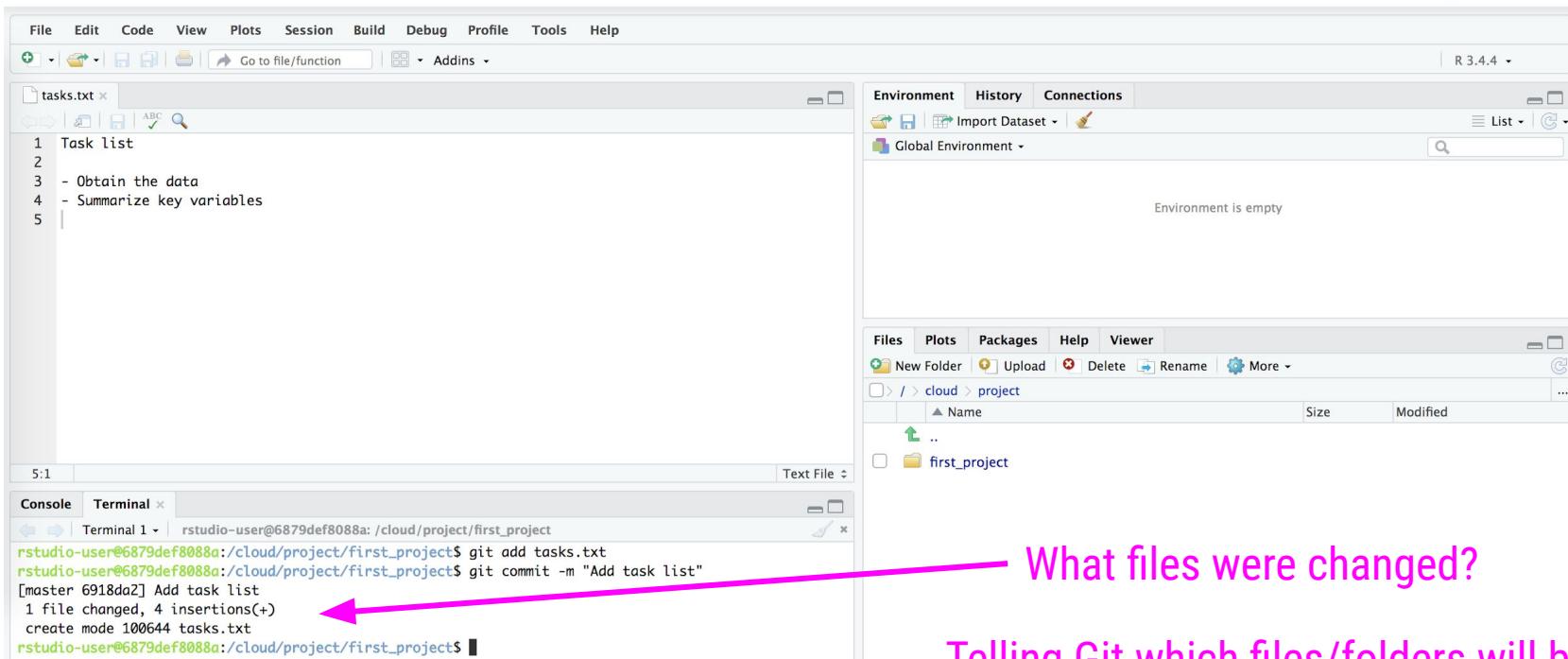
Terminal prompt shows the  
current working directory:  
`/cloud/project/`

**pwd:** prints the current working directory  
**ls:** lists files and folders in the directory  
**cd:** change directory

# Staging files and folders with git add

---

|                        |                                                |
|------------------------|------------------------------------------------|
| git add file_or_folder | stages <b>specified file or folder</b>         |
| git add .              | stages <b>new and modified files</b>           |
| git add -u             | stages <b>modified and deleted files</b>       |
| git add -A             | stages <b>new, modified, and deleted files</b> |
| git add *.csv          | Stages <b>any files with .csv extension</b>    |
| git add *              | Use with caution: stages <b>everything</b>     |



File Edit Code View Plots Session Build Debug Profile Tools Help

Go to file/function Addins

tasks.txt

```
1 Task list
2
3 - Obtain the data
4 - Summarize key variables
5
```

Environment History Connections

Import Dataset

Global Environment

Environment is empty

Files Plots Packages Help Viewer

New Folder Upload Delete Rename More

/ > cloud > project

| Name          | Size | Modified |
|---------------|------|----------|
| ..            |      |          |
| first_project |      |          |

Console Terminal

```
rstudio-user@6879def8088a:/cloud/project/first_project$ git add tasks.txt
rstudio-user@6879def8088a:/cloud/project/first_project$ git commit -m "Add task list"
[master 6918da2] Add task list
1 file changed, 4 insertions(+)
create mode 100644 tasks.txt
rstudio-user@6879def8088a:/cloud/project/first_project$
```

What files were changed?

**git add file\_or\_folder**

Telling Git which files/folders will be tracked  
for version control

**git commit -m "Descriptive message about changes"**

Actually update version history of those files/folders

File Edit Code View Plots Session Build Debug Profile Tools Help

Source

Console Terminal x

```
rstudio-user@6879def8088a:/cloud/project/first_project$ git push
warning: push.default is unset; its implicit value has changed in
Git 2.0 from 'matching' to 'simple'. To squelch this message
and maintain the traditional behavior, use:

git config --global push.default matching

To squelch this message and adopt the new behavior now, use:

git config --global push.default simple

When push.default is set to 'matching', git will push local branches
to the remote branches that already exist with the same name.

Since Git 2.0, Git defaults to the more conservative 'simple'
behavior, which only pushes the current branch to the corresponding
remote branch that 'git pull' uses to update the current branch.

See 'git help config' and search for 'push.default' for further information.
(The 'simple' mode was introduced in Git 1.7.11. Use the similar mode
'current' instead of 'simple' if you sometimes use older versions of Git)

error: cannot run rpostback-askpass: No such file or directory
Username for 'https://github.com': JaneEverydayDoe
error: cannot run rpostback-askpass: No such file or directory
Password for 'https://JaneEverydayDoe@github.com':
Counting objects: 3, done.
Delta compression using up to 16 threads.
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 345 bytes | 0 bytes/s, done.
Total 3 (delta 0), reused 0 (delta 0)
To https://github.com/JaneEverydayDoe/first_project.git
 a02e81b..6918da2 master -> master
rstudio-user@6879def8088a:/cloud/project/first_project$
```

Environment History Connections

Import Dataset

Global Environment

git push

→ Publish these changes to a remote repository (GitHub)

Files Plots Packages Help Viewer

New Folder Upload Delete Rename More

/ cloud project

| Name          | Size | Modified |
|---------------|------|----------|
| ..            |      |          |
| first_project |      |          |

Enter GitHub username and password

---

Pushing changes

# Pulling

---



- Others have pushed changes to the remote repository.
- You want to incorporate those changes into your local repository.
- Git commands covered
  - pull

[This repository](#)[Search](#)[Pull requests](#) [Issues](#) [Marketplace](#) [Explore](#)[JaneEverydayDoe / first\\_project](#)[Watch](#) [0](#)[Star](#) [0](#)[Fork](#) [0](#)[Code](#)[Issues 0](#)[Pull requests 0](#)[Projects 0](#)[Wiki](#)[Insights](#)[Settings](#)

Branch: master ▾

[first\\_project / tasks.txt](#)[Find file](#) [Copy path](#)

JaneEverydayDoe Add task item

8659545 a minute ago

1 contributor

6 lines (4 sloc) | 76 Bytes

[Raw](#) [Blame](#) [History](#)

```
1 Task list
2
3 - Obtain the data
4 - Summarize key variables
5 - Write short report
```

tasks.txt has been changed

---

Changes made by others

File Edit Code View Plots Session Build Debug Profile Tools Help

Go to file/function Addins R 3.4.4

Source

Console Terminal x

Terminal 1 | rstudio-user@6879def8088a: /cloud/project/first\_project

to the remote branches that already exist with the same name.

Since Git 2.0, Git defaults to the more conservative 'simple' behavior, which only pushes the current branch to the corresponding remote branch that 'git pull' uses to update the current branch.

See 'git help config' and search for 'push.default' for further information.  
(the 'simple' mode was introduced in Git 1.7.11. Use the similar mode 'current' instead of 'simple' if you sometimes use older versions of Git)

error: cannot run rpostback-askpass: No such file or directory  
Username for 'https://github.com': JaneEverydayDoe  
error: cannot run rpostback-askpass: No such file or directory  
Password for 'https://JaneEverydayDoe@github.com':  
Counting objects: 3, done.  
Delta compression using up to 16 threads.  
Compressing objects: 100% (3/3), done.  
Writing objects: 100% (3/3), 345 bytes | 0 bytes/s, done.  
Total 3 (delta 0), reused 0 (delta 0)  
To https://github.com/JaneEverydayDoe/first\_project.git  
 a02e81b..6918da2 master -> master  
rstudio-user@6879def8088a:/cloud/project/first\_project\$ git pull

remote: Counting objects: 3, done.  
remote: Compressing objects: 100% (3/3), done.  
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0  
Unpacking objects: 100% (3/3), done.  
From https://github.com/JaneEverydayDoe/first\_project  
 6918da2..8659545 master -> origin/master  
Updating 6918da2..8659545  
Fast-forward  
 tasks.txt | 1 +  
 1 file changed, 1 insertion(+)

rstudio-user@6879def8088a:/cloud/project/first\_project\$

Environment History Connections

Import Dataset Global Environment

Environment is empty

Files Plots Packages Help Viewer

New Folder Upload Delete Rename More

/ > / cloud > project

| Name          | Size | Modified |
|---------------|------|----------|
| ..            |      |          |
| first_project |      |          |

git pull → Incorporate changes from remote repository

What files were changed?

Pulling changes made by others

# Github lab

<https://bit.ly/1H0qcwB>



“An analysis can be fully  
reproducible and still  
be wrong.”