
```
library(dplyr)
```

```
rladies_global %>%  
  filter(city == 'Berlin')
```







Welcome!





We're Chrissy, Hanna, Noa & Ulrike

In March 2017 got together to form the Berlin chapter of R-Ladies. You can follow our activity (and help us spread the word) on   [@RLadiesBerlin](https://www.facebook.com/RLadiesBerlin) and sign up for upcoming events on  [rladies-berlin](https://www.meetup.com/rladies-berlin).





1.

What is R-Ladies?

Founded by statistician Gabriele de Queiroz in San Francisco, Oct 2012, R-Ladies aims to increase of the participation of women in the R community by encouraging women to join the coding community, develop R packages and to increase the attendance and visibility of women as speakers at R conferences and meetings





2. Code Of Conduct

- Public events are *always* for free
- The conceptual domain / scope is R-specific
- Be aware and acknowledge *other*'s contribution
- Use neutral language
- Constructive, supportive and *gender-inclusive* environment to share, learn and network
- Organizational & mentoring roles are exclusively reserved for women



|

3. Our next meetups

Tuesday, 13th March





#Online Hands-on

How to get structure into your R code with Rprojects and Github





#Outline

I. Github.com

II. Rprojects

III. Git installation





I.

Github.com

- Basic principles of Github.com
- Create an account on Github.com
- Create your own first repo







Github.com – The wonderland of open source

The screenshot shows the GitHub homepage with a dark blue background. On the left, the text 'Built for developers' is prominently displayed. Below it, a paragraph describes GitHub as a development platform inspired by the way you work, from open source to business. On the right, there is a white sign-up form with fields for Username, Email, and Password. A green button labeled 'Sign up for GitHub' is at the bottom of the form. Above the form, there is a search bar and links for 'Sign in' or 'Sign up'.

Features Business Explore Marketplace Pricing Search GitHub Sign in or Sign up

Built for developers

GitHub is a development platform inspired by the way you work. From **open source** to **business**, you can host and review code, manage projects, and build software alongside millions of other developers.

Username
Pick a username

Email
you@example.com

Password
Create a password

Use at least one 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'll occasionally send you account related emails.

Search for:

Rladies or rladies
berlin

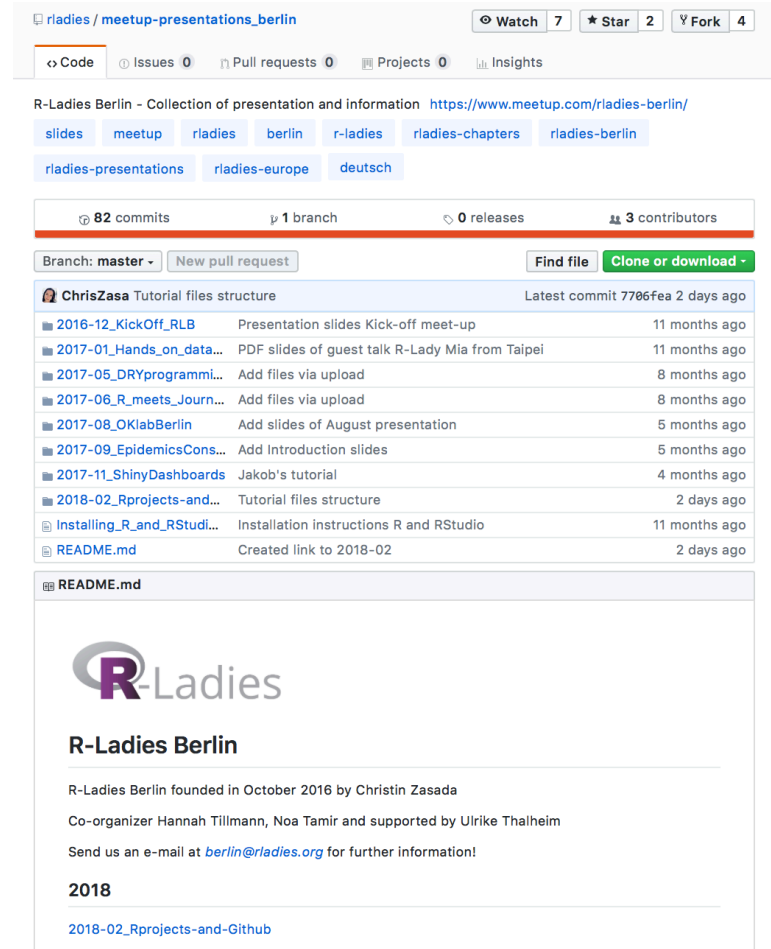
Github.com

Tags of ladies group

Folder structure of the
ladies_berlin repo

Content of the README.md

Markdown and rmarkdown are
Used for readable documents



The screenshot shows the GitHub repository page for 'ladies / meetup-presentations_berlin'. At the top, there are navigation tabs for 'Code', 'Issues', 'Pull requests', 'Projects', and 'Insights'. The repository is described as 'R-Ladies Berlin - Collection of presentation and information' with a link to 'https://www.meetup.com/rladies-berlin/'. Below this, there are tags for 'slides', 'meetup', 'rladies', 'berlin', 'r-ladies', 'rladies-chapters', 'rladies-berlin', 'rladies-presentations', 'rladies-europe', and 'deutsch'. The repository statistics show 82 commits, 1 branch, 0 releases, and 3 contributors. The 'Branch: master' is selected, and there is a 'New pull request' button. A 'Find file' button and a 'Clone or download' button are also present. The file list shows the following structure:

File	Description	Latest commit
2016-12_KickOff_RLB	Presentation slides Kick-off meet-up	11 months ago
2017-01_Hands_on_data...	PDF slides of guest talk R-Lady Mia from Taipei	11 months ago
2017-05_DRYprogrammi...	Add files via upload	8 months ago
2017-06_R_meets_Journ...	Add files via upload	8 months ago
2017-08_OKlabBerlin	Add slides of August presentation	5 months ago
2017-09_EpidemicsCons...	Add Introduction slides	5 months ago
2017-11_ShinyDashboards	Jakob's tutorial	4 months ago
2018-02_Rprojects-and...	Tutorial files structure	2 days ago
Installing_R_and_RStudi...	Installation instructions R and RStudio	11 months ago
README.md	Created link to 2018-02	2 days ago







The README.md file content is displayed below the file list. It features the R-Ladies logo and the title 'R-Ladies Berlin'. The text describes the organization, its founding in October 2016 by Christin Zasada, and its co-organizers Hannah Tillmann, Noa Tamir, and Ulrike Thalheim. It also provides an email address for further information: berlin@rladies.org. The year '2018' is highlighted, and a link to the '2018-02_Rprojects-and-Github' folder is provided.





The two types of file viewer

[meetup-presentations_berlin](#) / [2017-01_Hands_on_datavis_ggplot2](#) /

 ChrisZasa PDF slides of guest talk R-Lady Mia from Taipei	Latest
..	
 TutorialFiles	Knitted HTML file of ggplot2 tutorial solutions
 1_Intro.pdf	Intro deck
 2_GuestTalk_Mia_Datavis_with ggplot2.pdf	PDF slides of guest talk R-Lady Mia from Taipei
 3_ggplot2_tutorial_intro.pdf	Tutorial introduction slides
 Installing_R_and_RStudio.pdf	How_to_install_R_RStudio



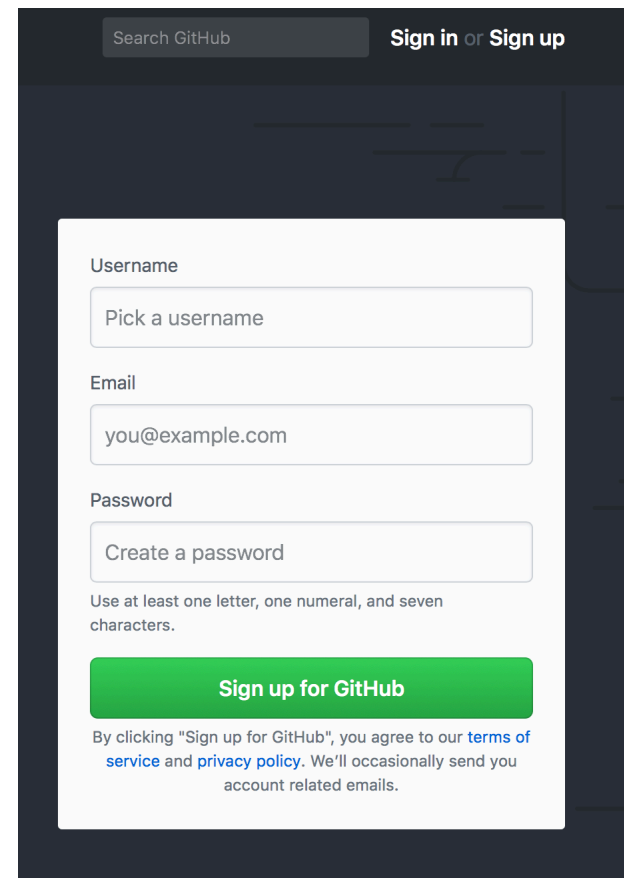
1 - Preview of the files
(Rmd, md and pdf)



2 - Real code viewer of the document
(Rmd & md only)



Github.com – Create your account!



A screenshot of the GitHub sign-up page. At the top, there is a dark header with a search bar labeled "Search GitHub" and links for "Sign in" or "Sign up". The main content area is a white card on a dark background. It contains three input fields: "Username" with the placeholder "Pick a username", "Email" with the placeholder "you@example.com", and "Password" with the placeholder "Create a password". Below the password field is a note: "Use at least one letter, one numeral, and seven characters." A green button labeled "Sign up for GitHub" is positioned below the note. At the bottom, a line of text states: "By clicking 'Sign up for GitHub', you agree to our [terms of service](#) and [privacy policy](#). We'll occasionally send you account related emails."

Search GitHub Sign in or Sign up

Username

Pick a username

Email

you@example.com

Password

Create a password

Use at least one 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'll occasionally send you account related emails.



Some advice – „Happy Git and GitHub for the useR“



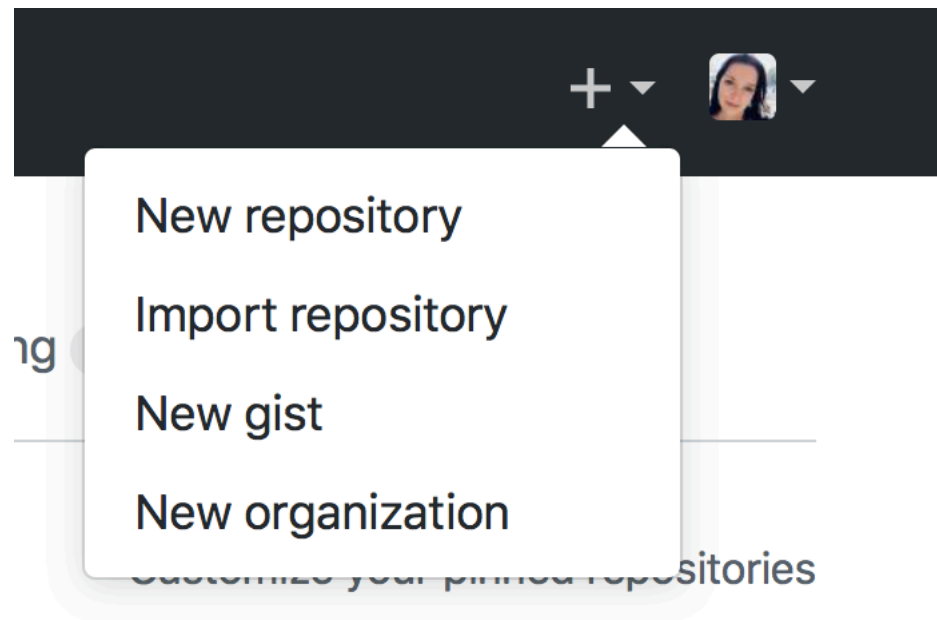
- Incorporate your actual name – easier to remember!
- Reuse your username from other contexts, e.g., Twitter, Slack
- Pick a username you will be comfortable revealing to future boss
- Shorter is better than longer
- Be as unique as possible
- Make it timeless, no current university
- Avoid words laden with special meaning in programming



Jenny Bryan
Rstudio



Create your first own repo



Github Repo settings

Choose a name or
Have a look at github suggestion

Public: for free
Private: 7 € / month

Activate „Initialize with README“


Create a new repository

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





Owner

Repository name

 ChrisZasa /

Great repository names are short and memorable. Need inspiration? How about **ubiquitous-spork**.

Description (optional)

- ☒  **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

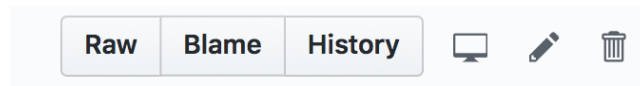


Modify your README



Klick on preview Readme
(blue file name)

And edit 😊



Readme example text

ubiquitous-spork

I am a second level headline

This is how you write **bold letters** and *italic* ones.

So far we covered:

- * Github intro
- * Created an account
- * Created your first repository





II. Rprojects

- Advantages using Rprojects
- New feature **DATA VIEWER**
- How to connect a Github repo with RStudio





Why Rprojects (*Rproj) ?

Setwd() – setting work directory manually

- Works for sure only on your computer
- Code is not portable
- Error-prone

*RProj – self-contained workflow

- 1st a folder keeping all files, code and output
- Easily portable
- Easy switch between projects
- Version control easily implementable



Setup a Rproject

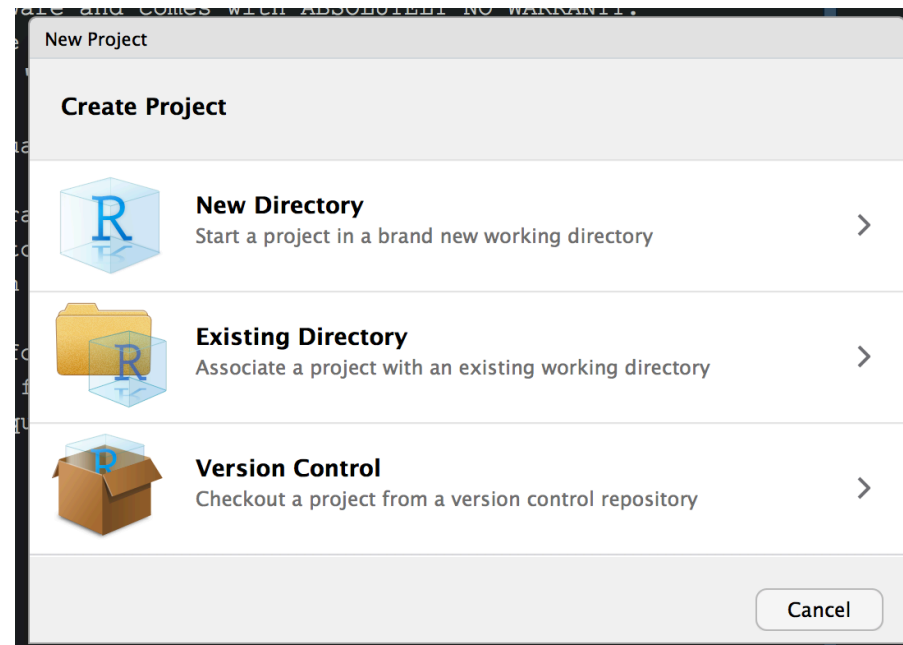


Create an Rproject either

- In a new folder
- Or existing folder

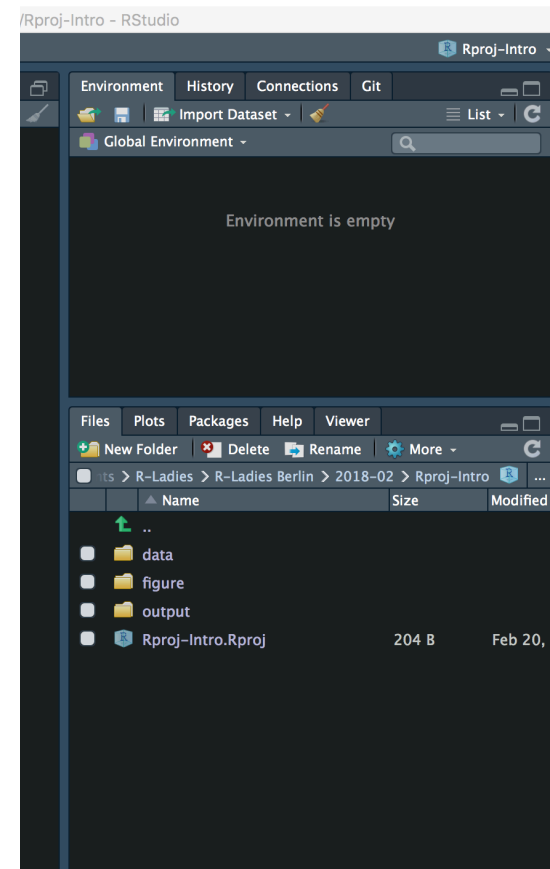
Browse to the directory
and find the Rproject-Icon

Create folders, e.g., data, figure
or output



Organised code

- Create a subfolder structure
- Import data:
`input = read.csv(„data/input_file.csv“)`
- Keep R functions in separate R-file or folder
- Keep input files untouchable and output files discardable
- Combine different reports and analysis of the same data at the same place



Good practices in coding – blog post



Naming conventiens

https://journal.r-project.org/archive/2012-2/RJournal_2012-2_Baaaath.pdf

Tipps & tricks: How to setup Rprojects

<https://nicercode.github.io/blog/2013-04-05-projects/>

Best practices in Writing R – conceptual coding

<https://swcarpentry.github.io/r-novice-inflammation/06-best-practices-R/>

Keep code readable – a lot of useful advices

<https://www.r-bloggers.com/strcode-structure-your-code-better/>





Data viewer

- A new convenient way to explore your data
- Interactive filter and label functions

<https://support.rstudio.com/hc/en-us/articles/205175388-Using-the-Data-Viewer>

Starting the viewer

You can invoke the viewer in a console by calling the **View** function on the data frame you want to look at. For instance, to view the built-in **iris** dataset, run these commands:

```
> data(iris)
> View(iris)
```

	Sepal.Length	Sepal.Width	Petal.Length	Petal.Width	Species
14	4.3	3.0	1.1	0.1	setosa
9	4.4	2.9	1.4	0.2	setosa
39	4.4	3.0	1.3	0.2	setosa
43	4.4	3.2	1.3	0.2	setosa
42	4.5	2.3	1.3	0.3	setosa
4	4.6	3.1	1.5	0.2	setosa
7	4.6	3.4	1.4	0.3	setosa
23	4.6	3.6	1.0	0.2	setosa
48	4.6	3.2	1.4	0.2	setosa
3	4.7	3.2	1.3	0.2	setosa

You can also start the viewer by clicking on the table data icon on the right, in the environment pane:

Data
iris 150 obs. of 5 variables



III. Installation of git



„Happy Git and GitHub for the useR“



- Step by step guide through the setup of git on your computer
- Detailed instructions and a lot of helpful comments



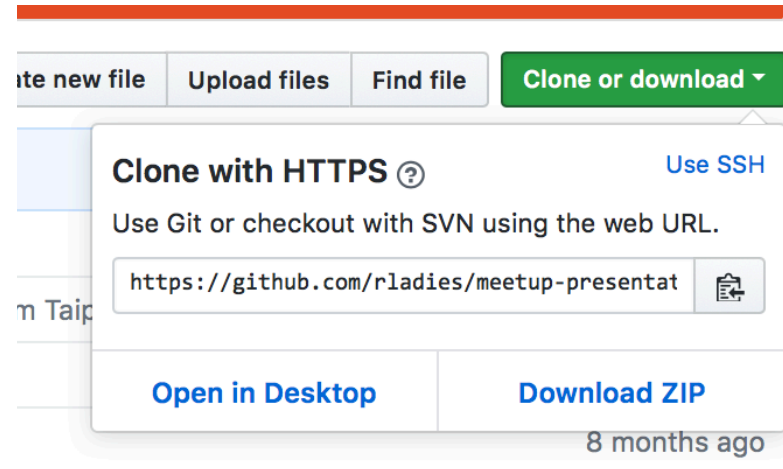
<http://happygitwithr.com/index.html>



How to import a Github repo



- Open a new Rproject -> Create from Version control
- Choose Git -> paste the url of our R-Ladies Berlin repo
- Define the project directory or subdirectory



https://github.com/rladies/meetup-presentations_berlin.git

Questions?

