## **GitHub**

## A short introduction

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# **Example**

Imagine you work **together with a colleague** on one script. You decide for the following workflow: Your colleague writes some new code in the script and send it via mail to you and you do the same. You do this for a few rounds and after a while you recognise that the code does not work anymore and you are not able to get the current script running again. If you thought about such a scenario before, you might have saved every **version** of this file. In this case you would have to check the changes made in every single file to find the error. If not you need to remeber all the **changes** which have been made.

▶ You might want to use **Git** to avoid problems like these.

▶ platform for version control and collaboration

What is GitHub?

- ▶ platform for version control and collaboration
- ▶ it tracks changes made to e.g. R code

Hands on

- ▶ platform for version control and collaboration
- ▶ it tracks changes made to e.g. R code
- ▶ platform to publish code

Hands on

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What is GitHub?

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How to use it?

► can also be used to backup and document your work

# How to use it?

What is GitHub? Why should you use it? How to use it? Some Vocabulary Hands on

#### How to use it?

- ▶ directly on https://github.com/
- ▶ git bash command line
- with a graphical user interface (GUI) on your computer e.g. https://www.sourcetreeapp.com/

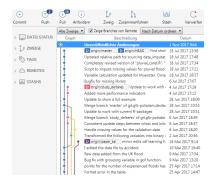


Figure 1: Example of source tree

#### Repository

► This is more a less a folder which is (version) controlled by GitHub; can be public or private (requires payment)

#### Clone

▶ get a remote repository and your local machine (computer)

#### Commit

 Commit (and comment) changes made to a file to the repository on your local machine

#### Push

► Local commits are getting uploaded to the remote repository

#### Pull

► Remote commits are getting downloaded loaded to your local machine (computer)

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- ▶ solve the following question and document your solution in the .md file: What can we say about the probabilities of observing multiple 1,000-year tornadoes in thousand years?

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- ▶ solve the following question and document your solution in the .md file: What can we say about the probabilities of observing multiple 1,000-year tornadoes in thousand years?
- push the changes on the remote repository

- ► https://rogerdudler.github.io/git-guide/index.de.html
- ► https://book.git-scm.com/
- ► http://marklodato.github.io/visual-git-guide/index-en.html

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