W11-1: Version control

This worksheet introduces you to Git and GitHub using the same example as the one from last session.

After completing this worksheet you should have gained some experience in using Git.

Things you need for this worksheet

- Git environment for your operating system. For Windows users with little experience on the command line we recommend GitHub Windows.
- R — the interpreter can be installed on any operation system. For Linux, you should use the r-cran packages supplied for your Linux distribution. If you use Ubuntu, this is one of many starting points. If you use windows, you could install R from the official CRAN web page.
- R Studio — we recommend to use R Studio for (interactive) programming with R. You can download R Studio from the official web page.
- your deliveries from W10-1: The how-to you always wanted

Learning log assignments

As always, please add these entries to your today's learning log at teachwiki:

- Favorite aspect of the session (if any)
- Superfluous aspect of the session (if any)
- Eureka effect (if any)
- Links to what I've learned so far (if any)
- Questions (if any)

For more information see this short howto.

As today's special, please complete the following assignment:

Based on your deliveries from W10-1 we want to create a comprehensive Git exercise which contains five parts:

1. Get a clone of the course repository and add a folder for your own staff inside the folder “src”.
2. Copy your R Markdown script from W10-1 to this folder and update your local version of the repository.
3. Extend your script by including another feature to the function.
4. Update your local repository again to include the update.
5. Push your local repository to the GitHub server.
6. Publish your R Markdown generated HTML document to your learning log.

In general, these tasks are quite simple and straight forward. However, you have to make sure that you do not change anything but files in your personal folder (which is a subfolder of “src”). If you use the command line and not GitHub Windows, make sure to commit locally first and update your clone

(i.e. git update) before pushing the new version to the server repository. If you use GitHub Windows it will remind you of all these steps anyway.

Let's do it:

Please get a local clone of our student GitHub repository for this course and create your personal folder inside the “src” folder.

Update your local repository by including your R Markdown file from W10-1 in your folder (do not forget to locally commit the version before you change your R Markdown file in the next step!).

Extend your R Markdown file by adding the possibility to define the number of grid lines (either vertical or horizontal since the number of both should be the same) which will be plotted on top of the map-type figure via the function call. The grid lines should also have labels which provide information on their respective Easting or Northing values. If your function body does not already have the principle feature, go back to E09-1 - Map-type figures on how to do it.

Update your local version of the student GitHub repository.

Push your local version back to the GitHub server.

Please upload the R Markdown generated html content to your learning log (see this short howto) and also add a link to your Github subfolder within the course repository.

If you experience any problems related to the push of your repository to the GitHub server, please do not delete the online repository on the GitHub page but ask someone for help.