ME314: Lab Session 1

Kenneth Benoit and Christian Müller

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Plan for today

- ▶ Using the RStudio server
- ▶ Introduction to Git and GitHub
- ▶ Installation of R, RStudio, and `quanteda`
- ▶ Working with a basic assignment

Accessing and using RStudio server

You should try accessing this server:

https://me314.hpccloud.lse.ac.uk

Gitting to know (git)

- ▶ Git is a distributed version control system (VCS)
- ▶ Git was written to manage the source code of the Linux kernel
- ▶ **Luckily, we will only need a small subset of the available commands**
- ▶ Those commands will allow you to:
  1. Download (`clone` and then `pull`) assignments from a centralized place (`repository` or `repo`) hosted at GitHub
  2. "Stage" your changes to the repository
  3. "Commit" your changes to your (local) repository

Gitting to know (git) continued

- ▶ Note that you will not be able to push your committed changes back to the original repository, because you will not have permissions to do this.
- ▶ More advanced users might choose to fork the repo and set an upstream remote to fetch changes. See this resource for details (entirely optional!)

Installing git

- ▶ First you need the `git` software itself. Download it from https://git-scm.com/downloads.
- ▶ Now you have two ways to actually use git to do stuff for you:
    1. Use a graphical client which works on top of the `git` software and generates a nice looking interface. We will install RStudio which contains a basic Git client.
    2. Use the command line, e.g. `git clone ...`.

Install R and RStudio

- ▶ Install R from https://cran.rstudio.com
- ▶ Install RStudio from https: //www.rstudio.com/products/rstudio/download/#download

If you already have R and RStudio installed, make sure that you have current versions:

- ▶ R: >= **3.4**
- ▶ RStudio: No reason not to get the latest, which is **1.1.453**
- ▶ If this proves problematic, just use use our cloud version

Install required R packages

- ▶ Open RStudio
- ▶ Any packages you need, for instance `ISLR`, you can install using RStudio's built-in R package manager in the "Packages" pane

Start using Git

- ▶ RStudio implements a Git client that we will use to download, or `clone` in git-speak, each assignment
- ▶ To use it, you first need the URL of the central location, or `repository`.
- ▶ Head to the first assignment https://github.com/lse-me314/assignment01 and click on the green button `Clone or download`
- ▶ Copy the URL in the pop-up
- ▶ Go back to RStudio and choose "File" > "New Project..." > "Version Control"
- ▶ Then choose "Git" and paste the URL in the appropriate field and change the folder as needed
- ▶ Hit "Create Project"
- ▶ Congratulations, you cloned your first Git repo!

Frequent issues

- In Windows, if RStudio cannot find Git, go to Tools > Global Options > Git/SVN and select the right Git executable. You may also need to add this route to your system Path (go to advanced settings)
- If two-factor authentication is activated in GitHub, you'll need to create a temporary token in Settings > Developer > Personal access token.
- If GitHub does not have your name or email, you'll need to add those using the Terminal in RStudio. Follow the instructions in the error message you get.