Introduction

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Overview

Organization

Lectures are scheduled each Tuesday, starting November, 7th.

This will be a mix of R programming and statistical modeling, ranging from data crunching to data mining and machine learning.

- Nov, 7: R basics
- Nov, 14: Graphics with `ggplot2`
- Nov, 15*: R dplyr, database connection
- Nov, 28: Statistical modeling in R
- Nov, 5:
- Nov, 12: Reporting with R Markdown and Shiny
- Nov, 19: Final project

Synopsis

R programming, statistical methods, hand-on practicals

Practicals

R Markdown report

Assessment

Combined use of practicals (20%), intermediate project (40%) and final assessment (40%).

Tools

Ressources

Ressources are available in the following Git-versioned repository: https://bitbucket.org/chlalanne/rstats-esme

You can fork the repository using `http` or `ssh` (`git@bitbucket.org:chlalanne/rstats-esme.git`) and keep posted with `git pull`. You can submit PRs if you like but please, don't push anything in the main repository.

Additional tools

- R and Rstudio
- Some R packages (and their dependencies which shall be installed automatically): tidyverse, ggplot2, data.table, leaflet, ...
- "R for Data Science" book (Wickham and Grolemund 2017), (maybe) "Advanced R" (Wickham 2014)

The following command will download required packages for you:

```
source("get_packages.R")
```

Eventually, you may want to install Git on your local machine, as well as a good text editor (other than Notepad).[1]

[1] I will not be of any help in case you are running Windows on your computer.[^2]

References

Wickham, Hadley. 2014. *Advanced R*. Chapman & Hall/CRC. https://adv-r.hadley.nz.

Wickham, Hadley, and Garrett Grolemund. 2017. *R for Data Science: Import, Tidy, Transform, Visualize, and Model Data*. O'Reilly Media, Inc. http://r4ds.had.co.nz.