

# POIR 613: Computational Social Science

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Course website:

[pablobarbera.com/POIR613/](http://pablobarbera.com/POIR613/)

## Software we will use in the course

- ▶ **R** – Install from <https://www.r-project.org/>
- ▶ **RStudio Desktop** – Install from <https://www.rstudio.com/products/rstudio/download/>
- ▶ **GitHub Desktop** – Install from <https://desktop.github.com/>

# Introduction to Git/GitHub

Git is a type of **version control**.

- ▶ System that keeps track of changes to a codebase and who made them
- ▶ Distributed (entire code and history on each machine) – Allows for collaborative development
- ▶ Easy to revert changes and go back to previous version
- ▶ Created by Linus Torvald in 2005 for Linux development
- ▶ Other options: Mercurial, Subversion
- ▶ **GitHub** allows you to host repositories and adds extra functionalities (UI, documentation, issues, user profiles...)
- ▶ Increasingly used for academic projects (e.g. Pew)

## Basic concepts of git

- ▶ Code lives in a **repository**: collection of all files (and history)
- ▶ Every time you make changes, you need to make a **commit**:
  - ▶ Creates a snapshot of your code.
  - ▶ Informs how files have changed (*differences*)
  - ▶ You need to add a message explaining changes
- ▶ After you commit, you need to **push** the changes to the repository on GitHub so that others can see them
- ▶ Note – you also need to **pull** first to receive changes from other people
- ▶ When you start from a repository someone created, you will have to first **fork** it (create a copy on GitHub) and then **clone** it (download) to your computer
- ▶ Other options for collaborative code development (**branches**, **pull requests**) – not necessary for the course

## Our first assignment with GitHub Classroom

1. Access the GitHub classroom for challenge 0 through: `https://classroom.github.com/a/X_BFsLDP` and accept the assignment
2. This will create your own version of the repository
3. **Clone** it using GitHub desktop
4. Write your personal information in `information.md`, **commit** the file and **push** the changes.
5. Fix the RMarkdown file `RMarkdown-practice.Rmd` so that it can be compiled. **Commit** and **push** this change.