



Git and GitHub



What is Git?

It is a Version Control System (VCS):

- Have multiple versions of a code (often across multiple developers/teams)
- You (and others) can see changes in the code and revert them

What is Github.com?

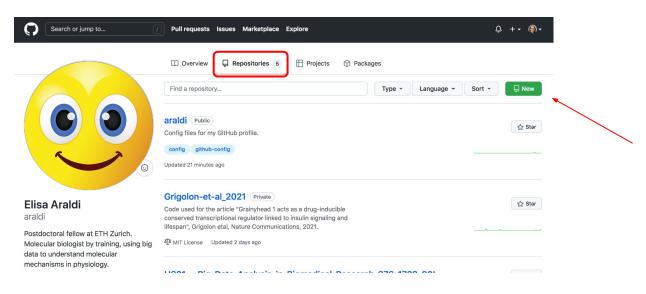
It is a website that hosts git repositories on a remote server:

Having repositories online helps sharing codes among teams/rest of the world



How to?

- Create a Github account;
- 2. Create a Github repository (include a README file with info on the project);





Create a new repository A repository contains all project files, including the revision history. Already have a project repository elsewhere? Import a repository. Repository name * Owner * araldi big-data-final-project Great repository names are short and memorable. Need inspiration? How about furry-giggle? Description (optional) This is the repo of my final project for the Big data analysis in biomedicine course Anyone on the internet can see this repository. You choose who can commit. You choose who can see and commit to this repository.

Initialize this repository with:

Skip this step if you're importing an existing repository.

Add a README file

This is where you can write a long description for your project. Learn more.

Add .gitignore

Choose which files not to track from a list of templates. Learn more.

Choose a license

A license tells others what they can and can't do with your code. Learn more.

This will set 3º main as the default branch. Change the default name in your settings.

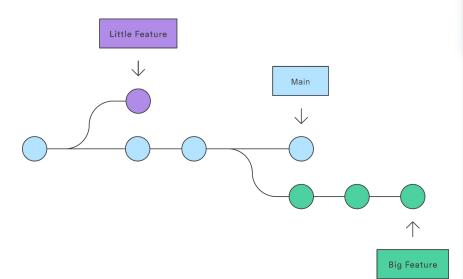
Create repository

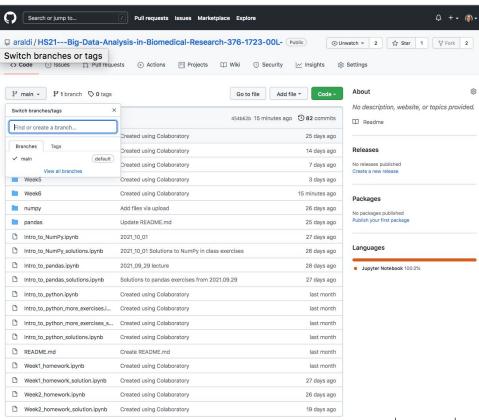
Make it private in the initial stages, but you can share with whom you want



Branches

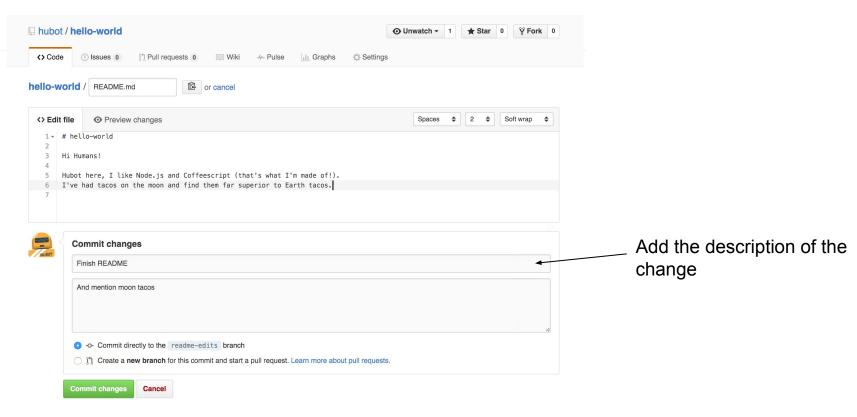
You can create multiple branches (versions) of the same repository. The branches can be considered versions where to experiment, while the main branch is used to make definitive edits.







Make and commit changes





Pull request and merge

If the changes are made in a branch outside of the main branch, open a **pull request** to implement the changes in the main branch. Mostly used for collaborative work.

Merging pull requests confirms the changes in the main branch



Forking projects

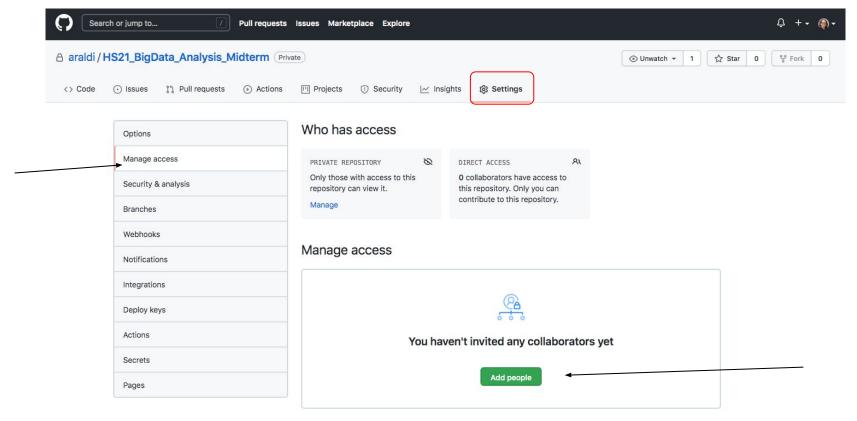
A **fork** produces a personal copy of the repository.

Clone the repository on your computer, using GitHub desktop or command line, to edit in a remote Jupyter notebook. **Push** changes/commits when ready.

OR open it in Google Colab, change the file there, then "Save a copy on GitHub" to save back to the GitHub repository.



To add people to a private repository





Do not forget to register for the midterm by tomorrow Nov 3rd!!

https://moodle-app2.let.ethz.ch/mod/url/view.php?id=819293