



Introduction to version control

Purposes

"Not only backup your files - Backup your changes"

History of all your changes

Central place for your code - Code clarity

Easily sharable

Necessity for collaboration

Reproducible research - Version management

You know that all changes are saved

You don't need to save unused code

What to host?

This document

Commands used in analyses

ALL your code

Git vs. other systems

Distributed

Fast

...

Terms

repository

commit

...

Remote repositories

Why having a remote?

Collaboration with others

Collaboration with yourself

Central place for your code

Cloning a repository

git clone

Working with a remote repo

Commands explained / visualized

git pull

git push

git push -u

git fetch

Let's create a repository

Just running the commands

git status/add/commit/log

What is a 'commit' in Git?

ID

Data

Ref. to parent

More terms

head

HEAD

master

File states within repo

Regular file

Staged

Committed

Commands explained / visualized

git add

git status

git log

git commit

git init

git diff

Version control for bioinformaticians

.gitignore

Installing software from Git (STAR as example)

Reproducible research

Resetting changes

Hosting your code, documents...

GitHub

BitBucket

Working with branches (\*)

Why branch?

Just running the commands

git branch/checkout

Visualize branches and commands

git branch

git checkout

git merge