

2 hours lesson

- WHY DO WE NEED IT?

- Made a mistake? Go back
- Document versions / modifications ←
- Collaborate with people on same projects
- Keep Track of multiple versions of same files

- WHAT IS IT?

- It's the practice of managing and tracking files for a project
- It can take the shape of many softwares → repositories per project

VERSION CONTROL SYSTEMS:

- Git
- Helix Core Perforce
- Microsoft TFS

- Local vs Remote Repositories

- EXAMPLES / APPLICATIONS

- Most common to track & manage source code → Python or R packages
- Track and manage a document (manuscript / thesis ...)
- Share publicly files / code for an open source project → PUBLICATION REF.
- Keep track of stable version while working on development version
- Quick save "status" of project/folder while working
- Improve modify existing projects while keeping ~~the~~ original intact → BLOG

- BASIC WORKFLOW / GOOD PRACTICE

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| <ul style="list-style-type: none">- Create / Clone- Modify files- Add- Commit with description- Push to remote rep. | <ul style="list-style-type: none">- Add ReadMe file- Commit frequently- Branch correctly → keep at end- Always fetch new modifications before working- Don't have uncommitted modifications badly |
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DIAGRAM

- SIMPLE SHOW CASE WITH GITLAB

- Create simple repository → students can clone
- Have the files on your laptop
- Modify something → show workflow
- Create and show branching
- Show merge a file to back to repo?

- every something → show comparison
- Create and show branching
 - Show merge conflict & how to solve?