## Git for Research in Economics

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### Version Control

Research in economics heavily relies on coding in all phases of projects:

- 1. data collection: e.g., python for scraping, python and R for NLP
- 2. econometric analysis: e.g. Stata and R
- 3. writing: e.g. Latex

Managing the workflow requires keeping track of code versions:

- avoiding conflicts and keeping track of most recent version
- documenting changes for future self (or future collaborators)

Widespread shift in economics towards reproducible results

→ we need a clean and quick way to share code with external users

### What we need

#### In managing versions, we need to:

- synchronize code with collaborators/multiple workstations
- back-up projects (not just files)
- track changes
- store comments
- manage code experiments

Keep code and data in a Dropbox folder.

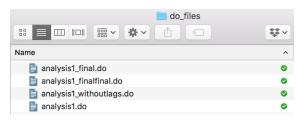
### What we need

In managing versions, we need to:

- ▶ synchronize code with collaborators/multiple workstations ✓
- ▶ back-up for projects (not just files) ✓/X

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Easy to mistake, difficult to keep track of why we did stuff (technical debt).

### What we need

In managing versions, we need to:

- ▶ synchronize code with collaborators/multiple workstations ✓
- ▶ back-up for projects (not just files) ✓/X
- track changes X
- store comments X
- manage code experiments X

### Git and GitHub

Git is a widely software for version control.

- it keeps (restorable) versions of your whole project
- compares versions of the same code (differences in lines)
- keeps track of comments with changes
- finds conflicts
- allows branching

Git works locally, synchronization requires a shared repository.

GitHub is a commonly used repository for Git.

#### References

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