

VERSION CONTROL

Picking the one right tool:
Git & GitHub

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VERSION CONTROL

Documenting the story of a project

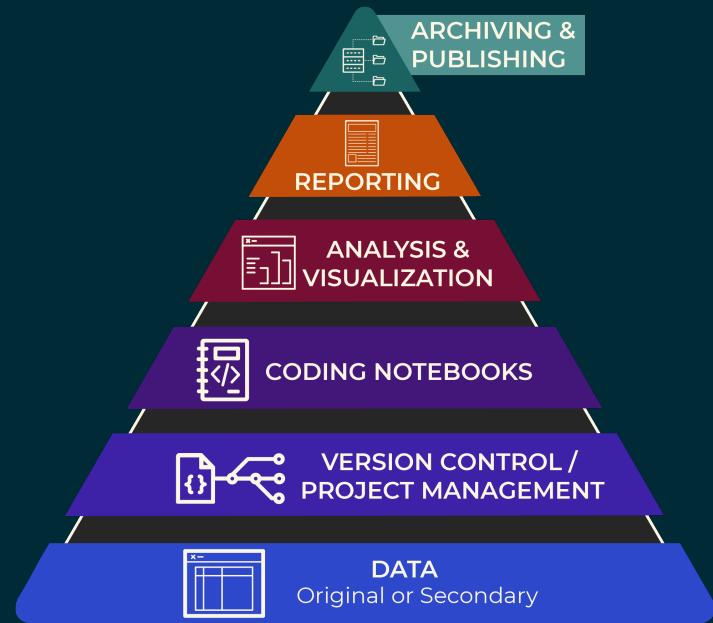
Among other features, version control enables *time travel*
i.e. interacting with earlier phases of a project

TWO-MINUTE VIDEO

<https://duke.is/git>



REPRODUCIBILITY



Reproducibility pyramid

Why

Version control enables
reproducibility

What

Reconstruct results, analyses,
and figures using the original
computation tools

How

Do everything with code

“You pick the one right tool” – Anton Chigurh

No Country for Old Men by Cormac McCarthy. 2005

Adapted to film by Cohen Bros. 2007

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SUMMARY

Llewelyn Moss

Protagonist finds a satchel of cash. There are no people claiming the cash for miles around. Finders Keepers
(played by Josh Brolin)

Anton Chigurh

Hired to retrieve the money. Has strong feelings about accomplishing his goals (Javier Bardem)

Carson Wells

Hired to assist Chigurh, unbeknownst to Chigurh (Woody Harrelson)

Ed Tom Bell

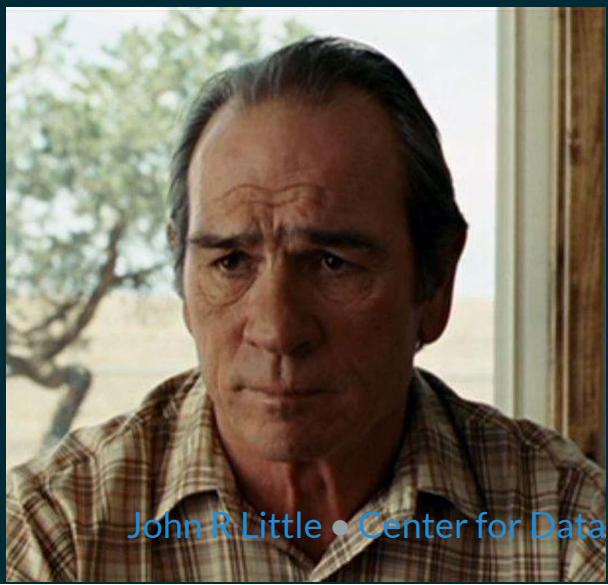
Trying to do his best amidst a difficult situation where there is no easy solution (Tommy Lee Jones)
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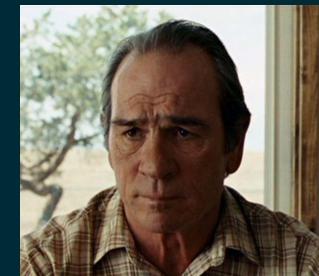






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SYMBIOTIC

Git and GitHub

Chigurh and Wells

Each side benefits the other

The relationship between Git and GitHub is not as dangerous. Git is a tool for version control, and GitHub is a remote hub (cloud / web) for storing and managing Git repositories. Git and GitHub work together to provide a powerful platform for collaboration.



NUTSHELL

Git is an emotionless, powerhouse application built to exhibit an indefatigable and extensible ability

- Track files changes over time
- Time-travel to earlier stages of the entire project
- Supports modern reproducibility better than other file synchronization approaches
- Portable, open-source application that runs on any computer, track any file, Works in enterprises including any university
- Git is available on OIT's GitLab and protected networks.



+

- Many free gui clients
- Works on any OS
- A workhorse
- Typically, you will use only 4-8 commands
- Pays huge dividends per investment



- Command-line UX
- Can be a challenge to install/configure
- The initial learning curve can feel steep (short hill)

MORAL



Use Git for projects
version control, collaboration, and reproducibility

Choose the right tools for the job

