

# VERSION CONTROL

Picking the one right tool:  
Git & GitHub

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# VERSION CONTROL

Documenting the story of a project

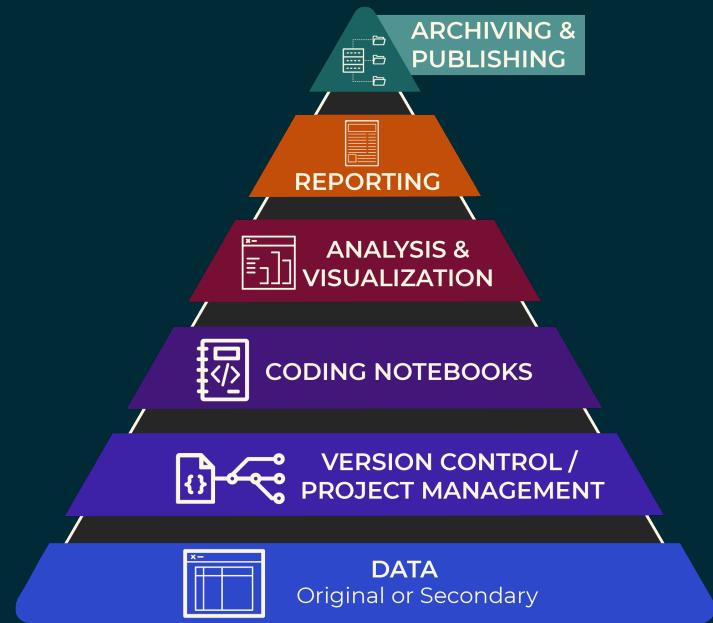
Among other features, version control enables *time travel*  
i.e. interacting with earlier phases of a project

# 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

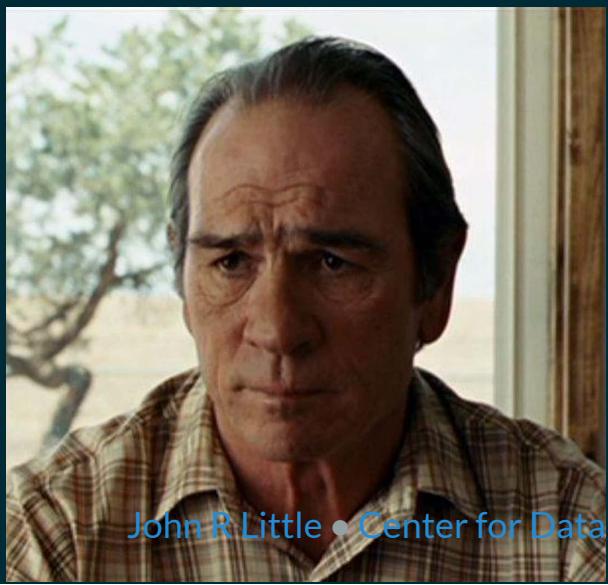
Trying to do his best amidst a difficult situation where there is no easy solution (Tommy Lee Jones)  
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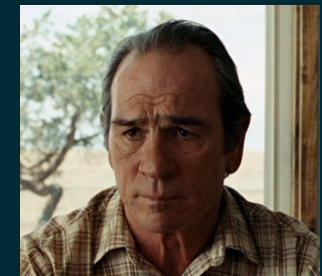


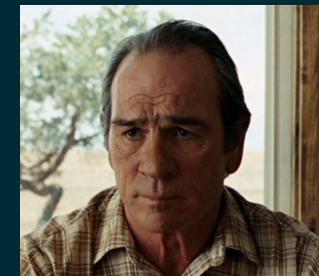






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# SYMBIOTIC

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

