

Version Control (with Git)

Software Design for Data Science

*Naomi Alterman
University of Washington
January 6, 2026*



Revisions

Sign challenge ☆ 📁 📄

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← February 28, 11:53 AM [Restore this version](#) Version history

100%

I am so grateful that I get to write for a living now.

That's more-or-less my constant minds but I rarely find myself in the mindset where I take a lot of time or effort. This leads to a more relaxed environment called "internet," where algorithms o'clock and oh well I'll seize the day tomorrow.

You've been there. We've all been there. Reason just can't get started on. Maybe the coding project you've been putting off. Maybe whatever the thing is, you just can't get started—I can relate.

Which is why over time I've found ways to add a few of my co-workers; use to start doing the thing. In other words, how to motivate motivated.

Use Your Calendar to Force You to Get Things Done

Every weekday morning, after breakfast, I check my calendar, and then figure out how I'm going to get what needs accomplishing. I then allocate time to each task.

This does two things. First: it forces me to add things to my calendar means not just a day, reminding me of the intention I set for myself. Accountability can keep me motivated. The second thing is that I have available each day. From author M. True! (<https://www.amazon.com/Only-We>)

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FINAL.doc!

FINAL_rev.2.doc

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FINAL_rev.8.comments5.CORRECTIONS.doc

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“Version control systems”

- Tools to keep track of changes over a collection of documents, called **repositories** (or “**repos**”)
- Distinguish between “**plaintext**” and “**binary files**”
 - Plaintext – Text and numbers, no formatting. “.txt” files, “.csv” files
 - Binary – Word docs, Excel sheets, JPEG images
- Designed for **asynchronous collaboration** on plain text
 - *Spectacular* at tracking and reconciling differences between subtly different versions of plaintext
 - *Competent* at taking “snapshots” of binary files across time, but bad at understanding how they’ve changed

Git

- One particular **standard** for how to do that change tracking
- There are a lot of different websites and applications (“**clients**”) that can work with git repos!



Naomi's favorite git clients



Git (Free, but no graphical interface)

<https://git-scm.com/>



Sublime Merge (\$\$\$, but you can run the trial indefinitely??)

<https://www.sublimemerge.com/>



GitFiend (Free....for now...also kind of junky)

<https://gitfiend.com/>



Git Kraken (Free version, no private repos)

<https://www.gitkraken.com/>



Glint (Free version, max 2 tabs open at once, no light theme)

<https://glint.info/en/>

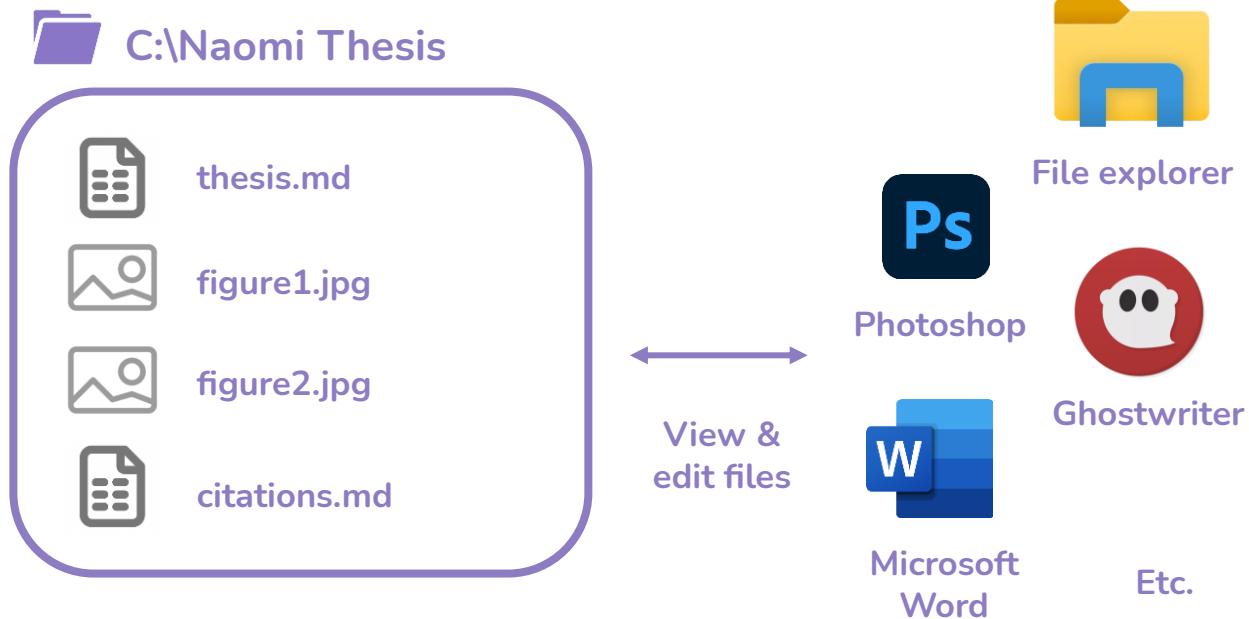
Engineering Mindset

I'll make a list of a couple of competing tools.

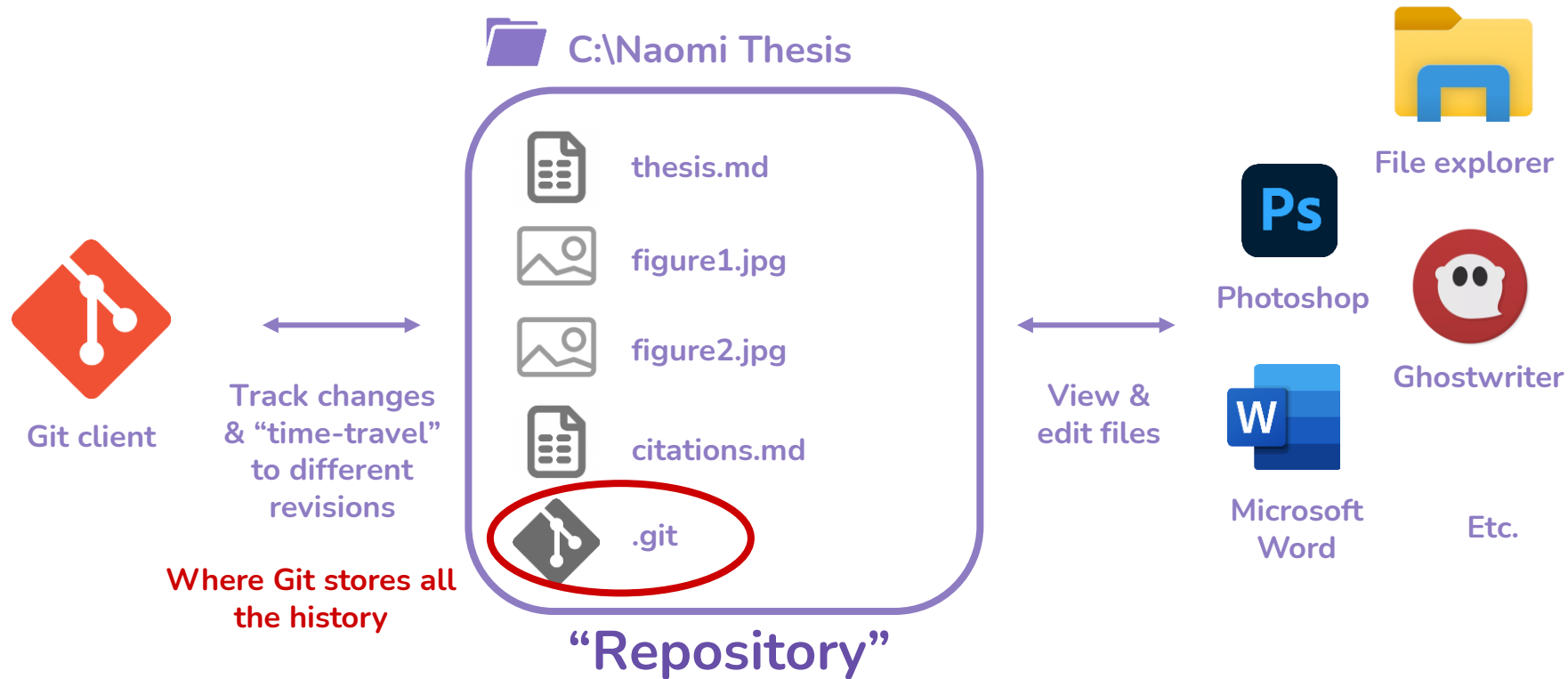
I'll invest **serious effort**, but **limited time** into trying out each of them.

I'll stick with the ones that **make the most sense to me** and not sweat the ones that don't.

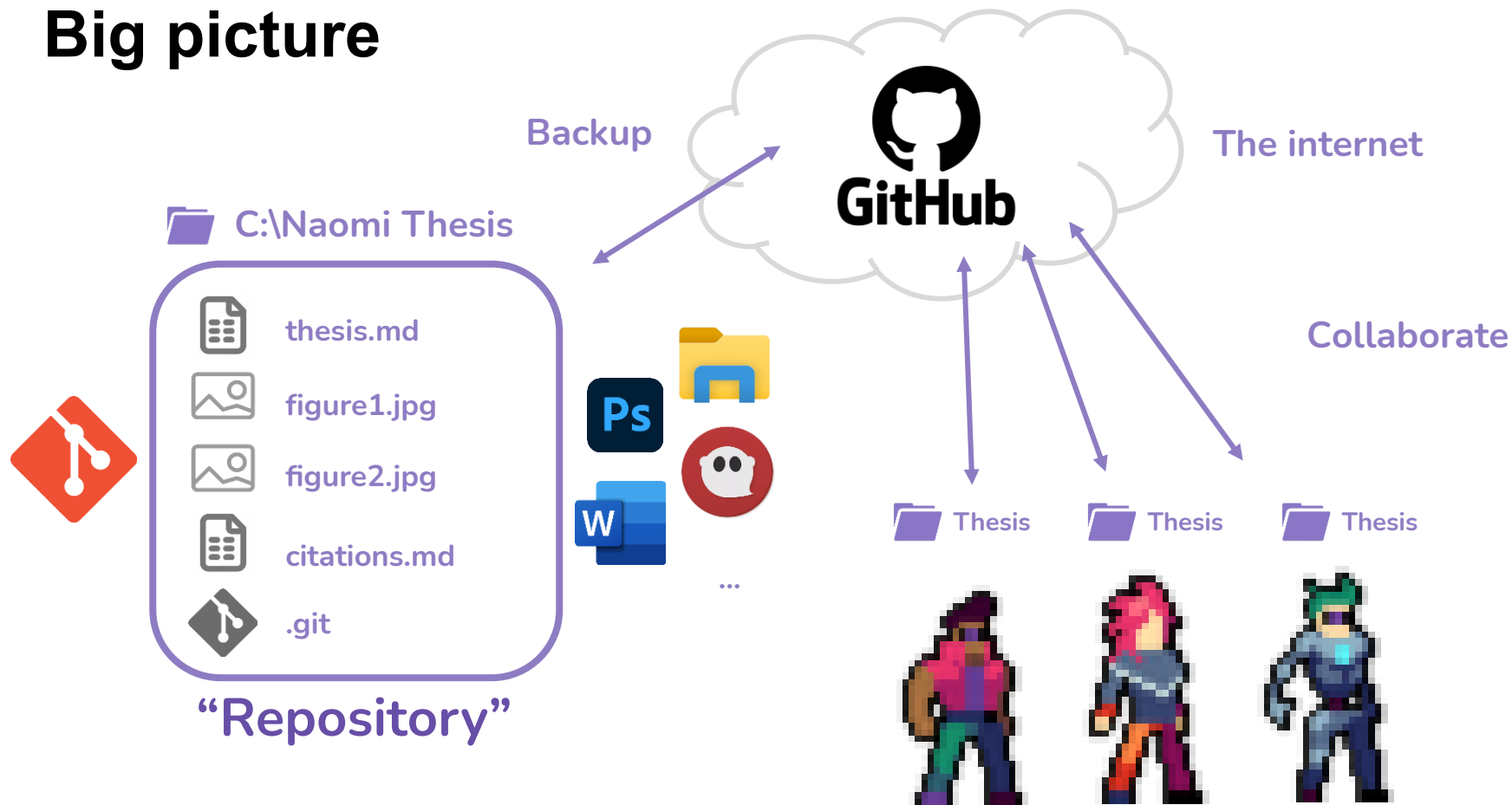
Big picture



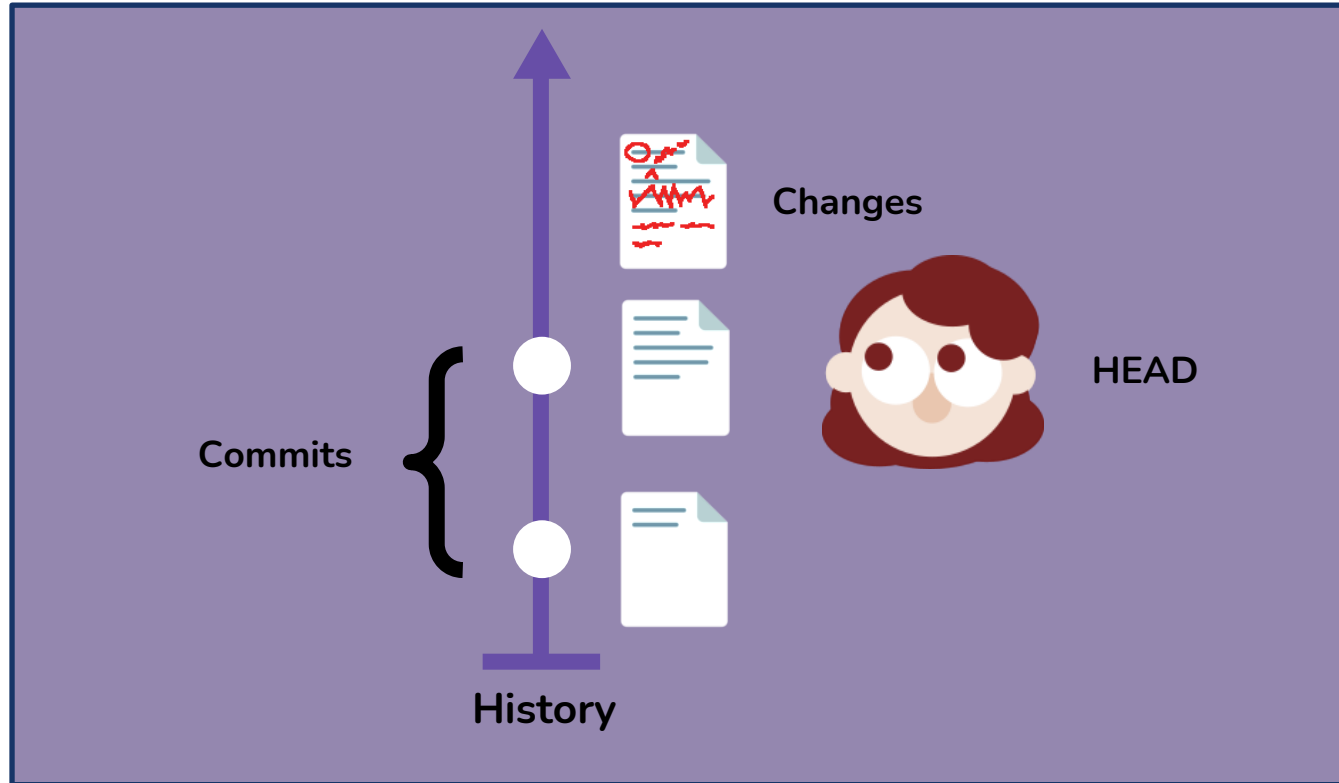
Big picture



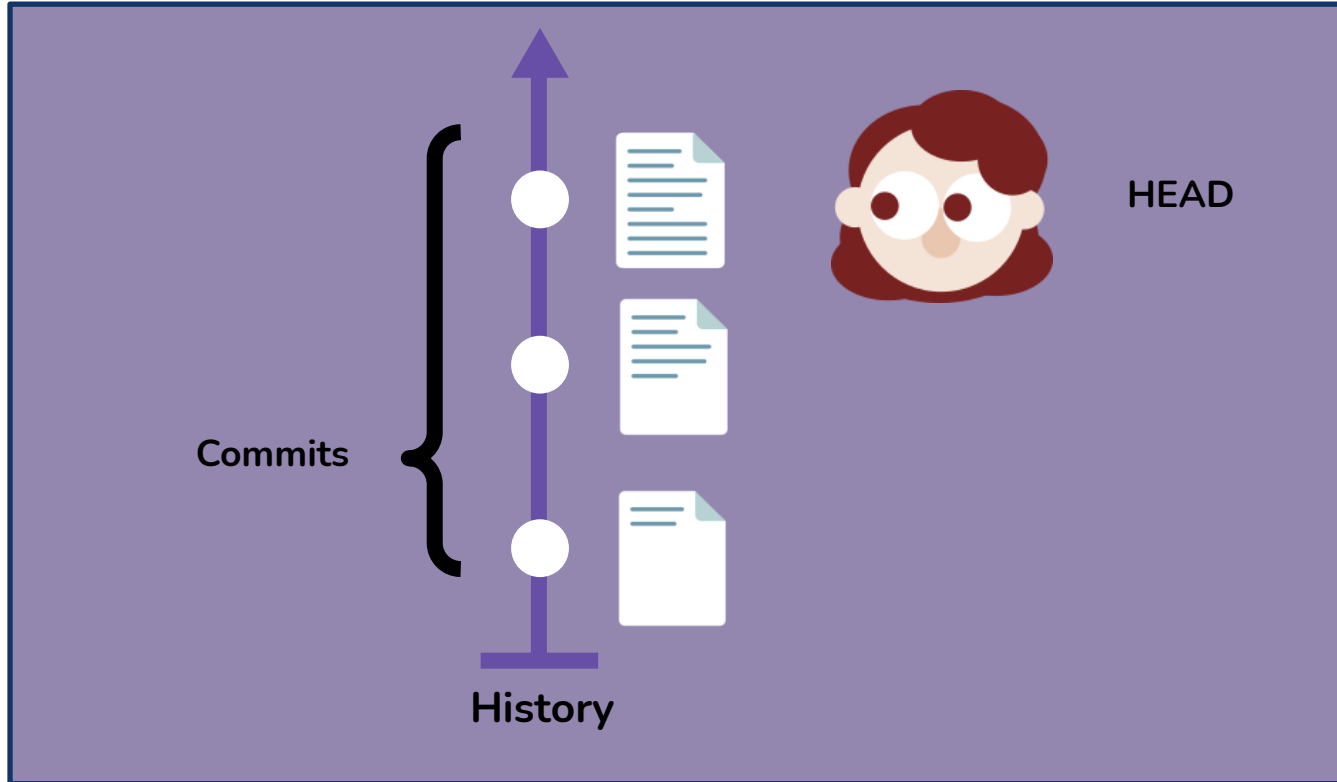
Big picture



Mental model



Mental model



Important point



git

is not

- A set of standards and reference tools for managing document revisions
- Free and open source
- Developed by a non-profit group of volunteers



GitHub

- A website that hosts git repositories
- Provides extra “value add” collaboration tools
- Free and paid tiers of service
- Developed by a for-profit company

Btw

TECH / MICROSOFT / BREAKING

Microsoft confirms it's acquiring GitHub for \$7.5 billion



By [TOM WARREN](#) / [@tomwarren](#)

Jun 4, 2018, 6:02 AM PDT | [0 Comments](#) / [0 New](#)



Microsoft is acquiring GitHub. After reports emerged that the software giant was in talks to acquire GitHub, Microsoft is making it official today. This is Microsoft CEO Satya Nadella's second big acquisition,

<https://www.theverge.com/2018/6/4/17422788/microsoft-github-acquisition-official-deal>

Food for thought

Git is an open source tool developed by volunteers.

Why is *Git* free?

GitHub (and GitLab and Sourceforge) are for-profit companies that host our Git repositories for free.

Why is *GitHub* free?



Some meta-talk

- Tech tools are like tax forms
- Doing things the “normal way” is almost always good enough
- Every once in a while it's not, and you ask an accountant for help



Let's get our hands dirty

Some resources

- Guide to getting started using Git and GitHub with GUI tools:
 - <https://uwescience.github.io/graphical-intro-to-git/>
- Guide to getting started using Git through the command line:
 - <https://swcarpentry.github.io/git-novice/>
- Git game:
 - <https://ohmygit.org/>
- A cheat sheet from our old friend Wizard Zines:
 - <https://wizardzines.com/zines/oh-shit-git/>