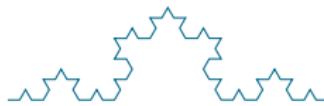


Git Your L^AT_EX On!

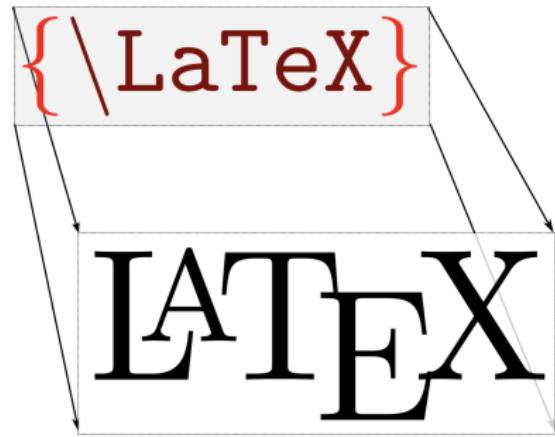
Joseph M. Fedrow



June 25, 2024



WHAT IS GIT AND LATEX?



Version control and Typesetting

HOW CAN THEY HELP YOU?

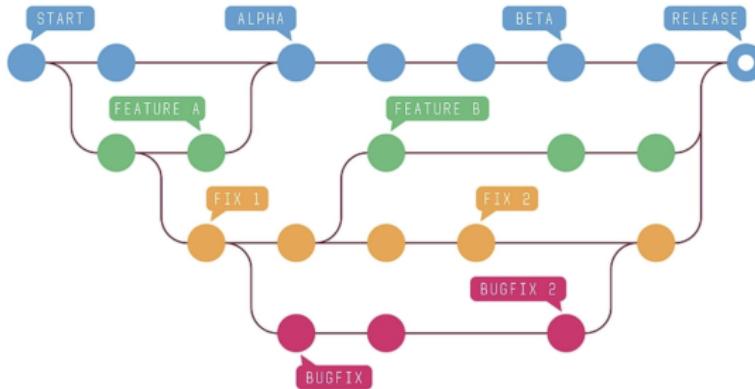
Version Control:

The practice of tracking and managing changes to source code over time

Keeps track of every modification to the code in a special kind of database. If a mistake is made, developers can turn back the clock and compare earlier versions of the code

Good for backups and making non-destructive edits

Really shines when working in teams on collaborative projects.



HOW CAN THEY HELP YOU?

Typesetting:

Helps make your documents looks professional.

Really shines when working with equations and tables.

$$\partial_u \xi_z^{(1)} + \frac{1}{u} \xi_z^{(1)} = \frac{1}{(\pi T R)^2 u} [C_z H'_{zz} + C_t H'_{tz}]$$



```
\partial _ { u } \xi _ { z } ^ { ( 1 ) } + \frac { 1 } { u } \xi _ { z } ^ { ( 1 ) } = \frac { 1 } { ( \pi T R ) ^ { 2 } u } [ C _ { z } H _ { z z } ^ { \prime } + C _ { t } H _ { t z } ^ { \prime } ]
```

HISTORY AND PHILOSOPHY OF GIT

2002: BitKeeper for Linux (proprietary)

2005: Git

Git is free and open source

Distributed Version Control System (DVCS)

Every clone is really a full backup of all the data.

GIT IS NOT GITHUB!

Git is a piece of software. GitHub is an online SaaS service.

GIT	GITHUB
Installed locally	Hosted in the cloud
First released in 2005	Company launched in 2008
Maintained by The Linux Foundation	Purchased in 2018 by Microsoft
Focused on version control and code sharing	Focused on centralized source code hosting
Primarily a command-line tool	Administered through the web
Provides a desktop interface named Git Gui	Desktop interface named GitHub Desktop
No user management features	Built-in user management
Minimal external tool configuration features	Active marketplace for tool integration
Competes with Mercurial, Subversion, IBM, Rational Team Concert and ClearCase	Competes with Atlassian Bitbucket and GitLab
Open source licensed	Includes a free tier and pay-for-use tiers

HOW TO USE GIT

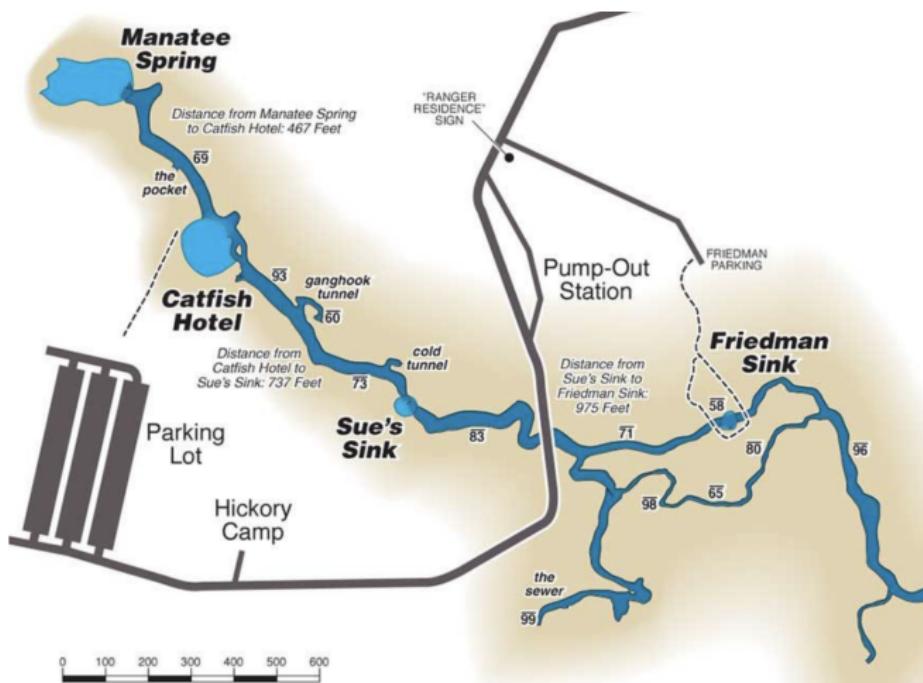
Install: git –version (osx)

<https://git-scm.com/book/en/v2/Getting-Started-Installing-Git>

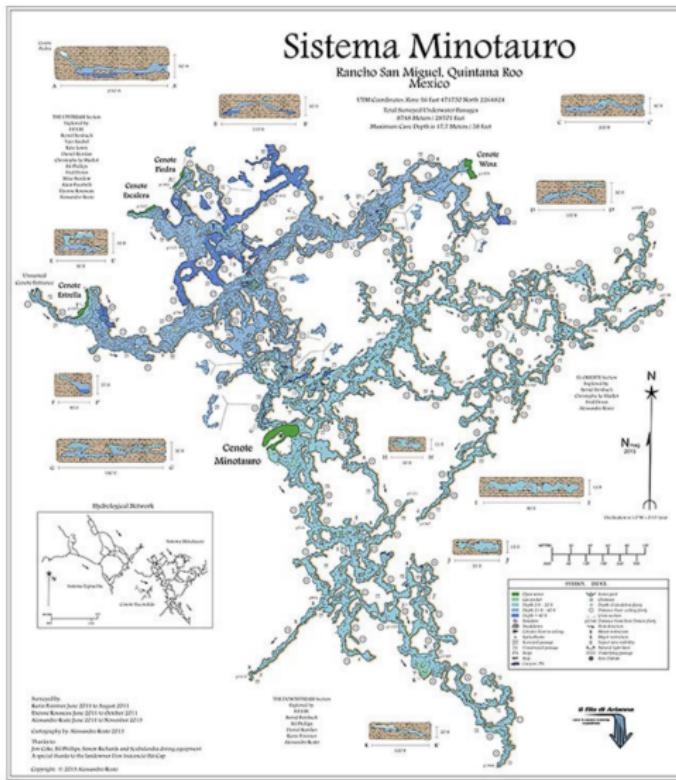
WHEN DIVING INTO GIT...



YOUR PATH CAN BE SIMPLE...



OR AS COMPLICATED AS YOU LIKE.



HISTORY OF TEX AND LATEX

1977 Donald Knuth developed Tex – a computer language and program designed for use in typesetting; in particular, for typesetting math and other technical (from Greek “techne” = art/craft, the stem of ‘technology’) material.

LaTeX was originally written in the early 1980s by Leslie Lamport at SRI International

LaTeX is intended to provide a high-level, descriptive markup language to utilize TeX more easily. TeX handles the document layout, while LaTeX handles the content side for document processing.

HOW TO USE LATEX

This write-format-preview cycle is one of the chief ways in which working with LaTeX differs from the What-You-See-Is-What-You-Get (WYSIWYG) style of document editing. It is similar to the code-compile-execute cycle known to computer programmers.

THIS ENTIRE PRESENTATION WAS DONE
IN GIT AND LATEX!

SUMMARY

RESOURCES

<https://git-scm.com/book/en/v2>