

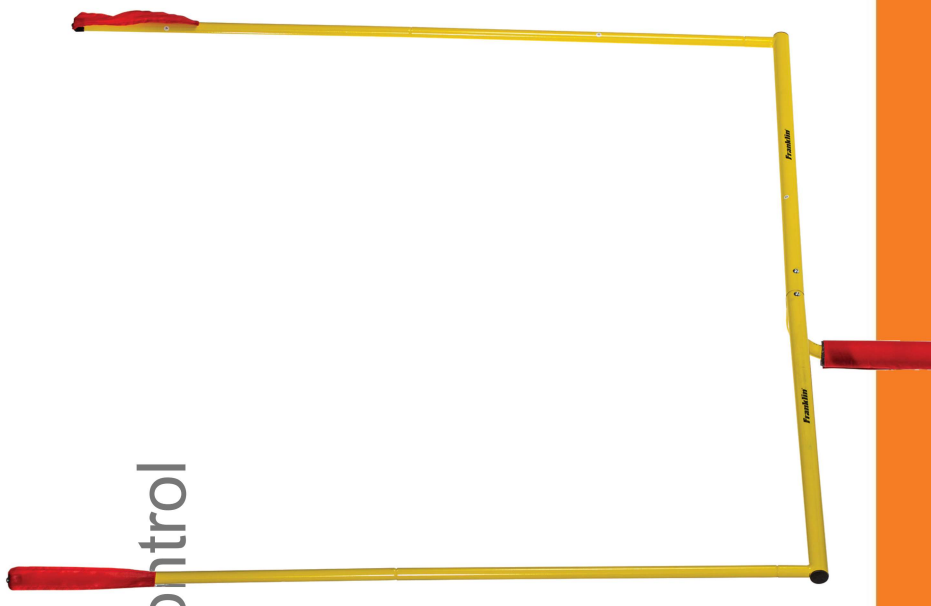
Big Picture





Goals

1. Name the key players behind git
2. Explain the concept of distributed version control
3. Name a few alternatives to git

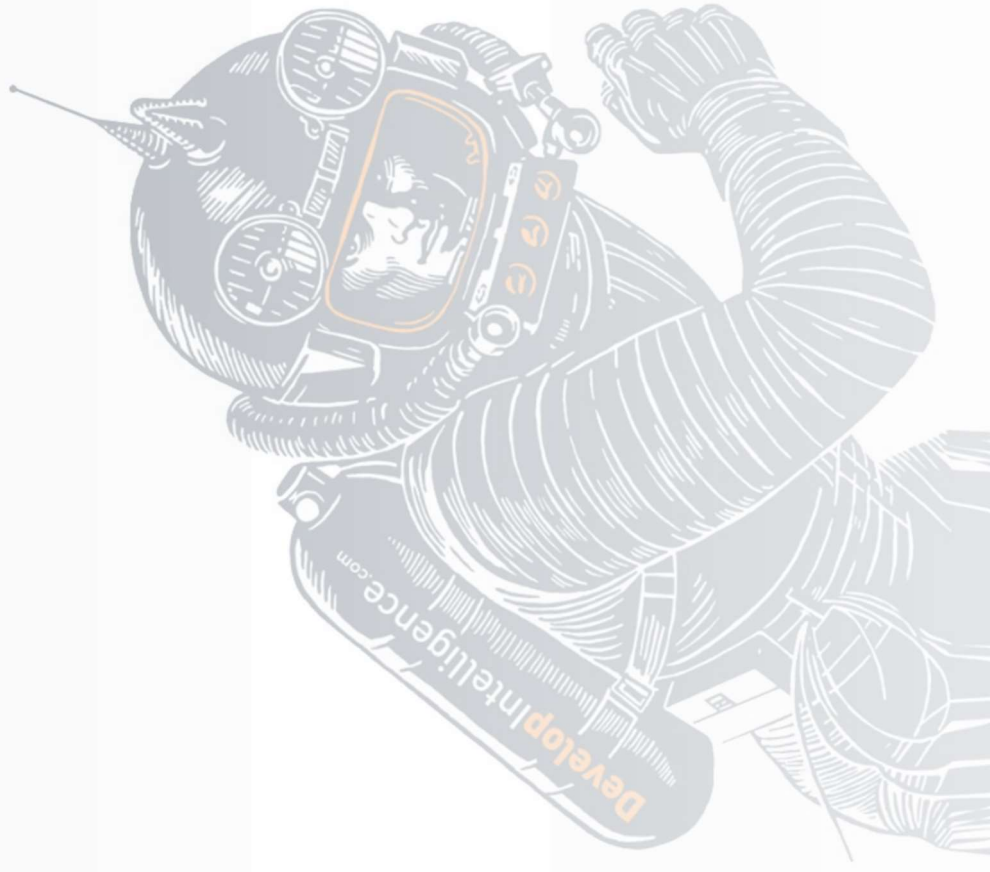




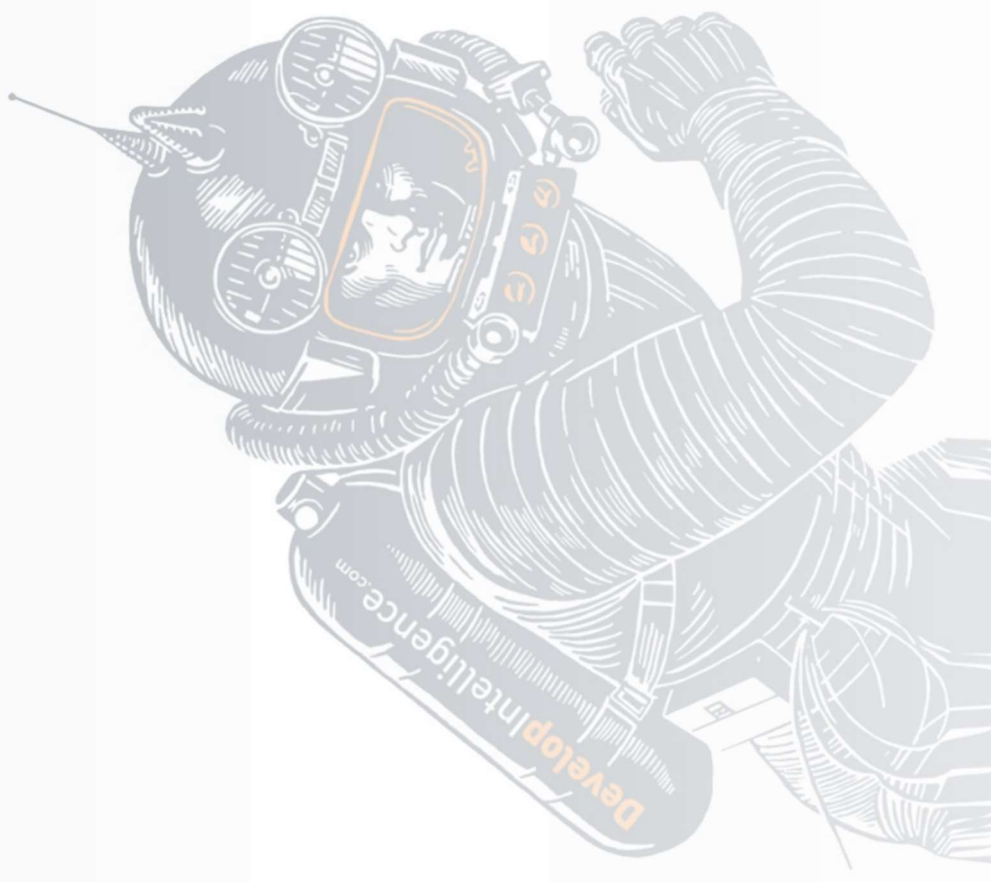
Roadmap

1. History
2. Current Landscape
3. Resources





History





Problem Statement - I

- You have important stuff
 - Term papers, blog posts, novels in progress
 - Financial documents
 - Applications
- There might be an act of God
- You might screw things up



Solution: Zip and Email

- Advantages
 - Easy to understand
 - Hard to screw up
- Disadvantages
 - Finding things
 - Working with others
 - People laugh at you



Solution: Version control

Version control software 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 to help fix the mistake while minimizing disruption to all team members.



Traditional VCS

- Central server for all code
 - Versions, branches, changes
- Advantages
 - Easier working with others
- Disadvantages
 - You rely on the central server
- Examples:
 - CVS, Subversion, VSS



Distributed Version control



Develop
Intelligence

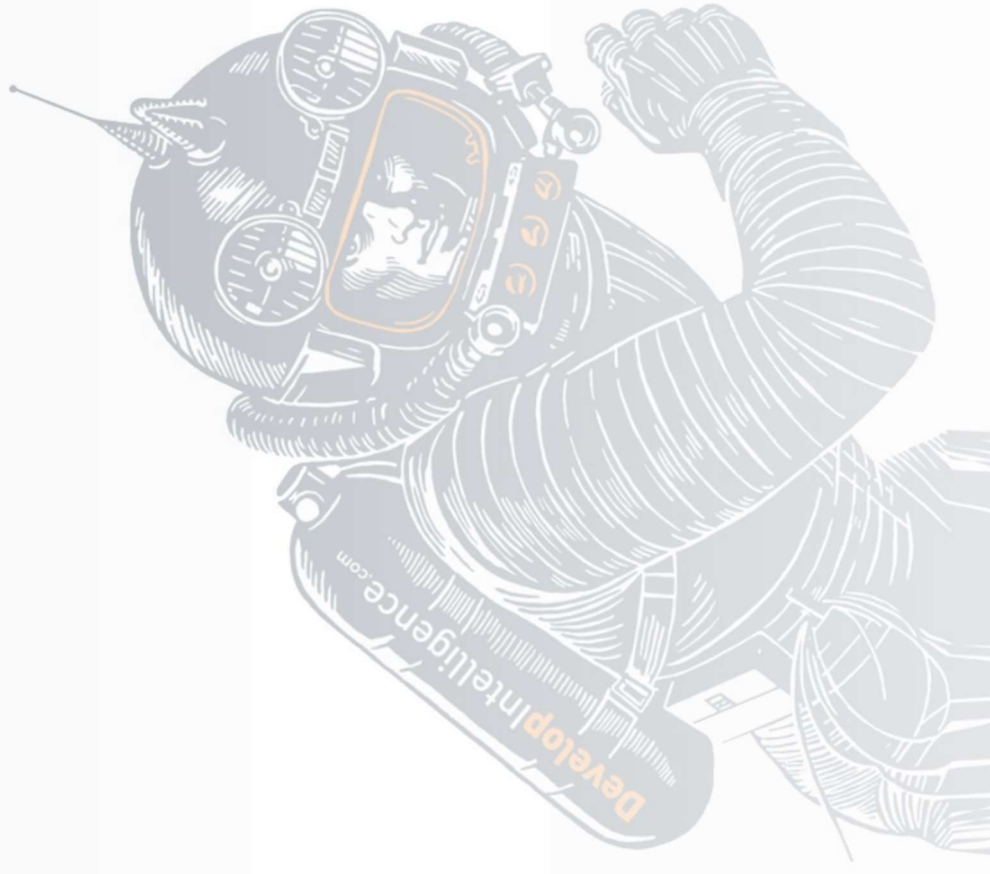
***Distributed version control** is a form of version control in which the complete codebase, including its full history, is mirrored on every developer's computer. Compared to centralized version control, this enables automatic management branching and merging, speeds up most operations (except pushing and pulling), improves the ability to work offline, and does not rely on a single location for backups.*



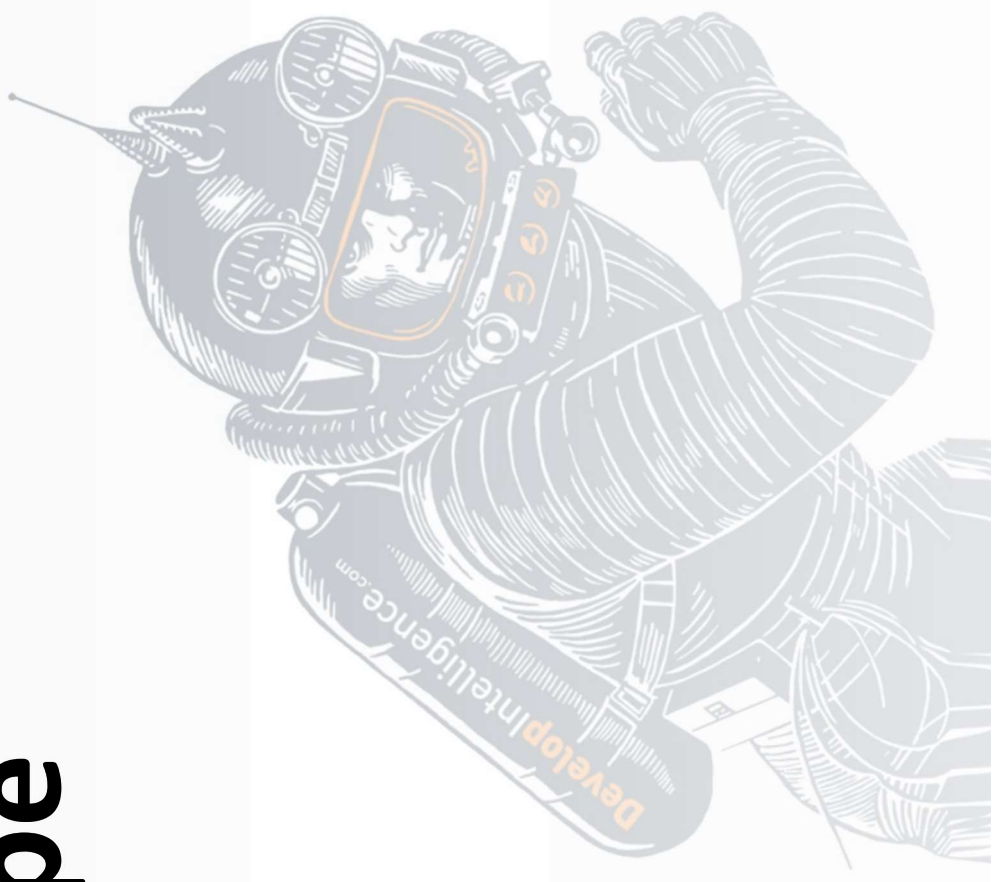
Birth of Git

- Spat with BitKeeper
- Linus Torvalds - 2005
- Junio Hamano - Ever Since





Current Landscape





Overview

- Git is universal
- There's an ecosystem
 - Github, Gitlab, Microsoft stuff
- Selling points





Everyone Uses Git

Name	2015	2017	2018	2022
Git	69.3%	69.2%	87.2%	93.9%
Subversion	36.9%	9.1%	16.1%	5.2%
TFVC	12.2%	7.3%	10.9%	[ii]
Mercurial	7.9%	1.9%	3.6%	1.13%
CVS	4.2%	[ii]	[ii]	[ii]
Perforce	3.3%	[ii]	[ii]	[ii]
VSS	[ii]	0.6%	[ii]	[ii]
ClearCase	[ii]	0.4%	[ii]	[ii]
Zip file backups	[ii]	2.0%	7.9%	[ii]
Raw network sharing	[ii]	1.7%	7.9%	[ii]
Other	5.8%	3.0%	[ii]	[ii]
None	9.3%	4.8%	4.8%	4.3%



Hosting Options

- Git is a free tool
- You can
 - Host it on your own server
 - Use a hosting provider
 - Github
 - Gitlab



Extras

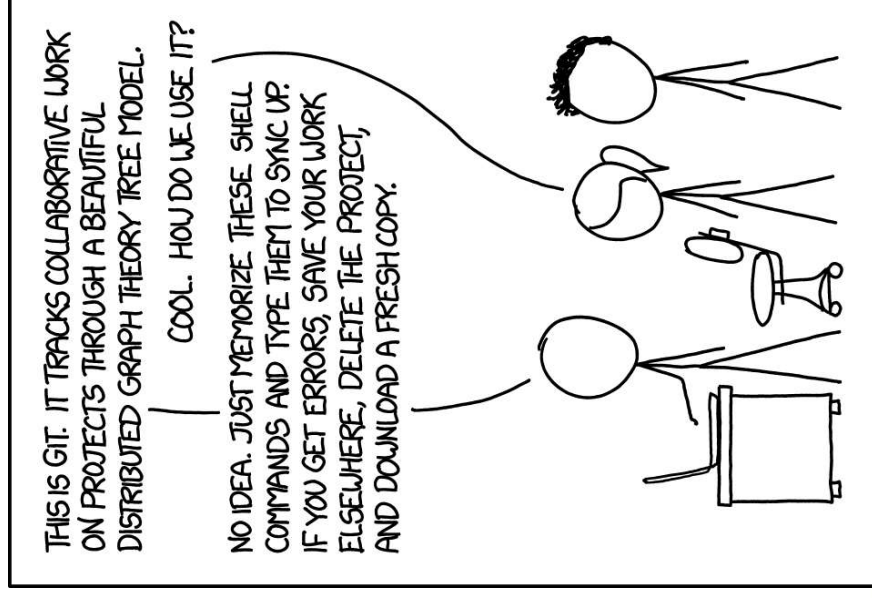
- Hosts may also provide
 - Pull request functionality
 - Continuous integration
 - Task management
 - Security scans
 - Wikis
 - Site hosting

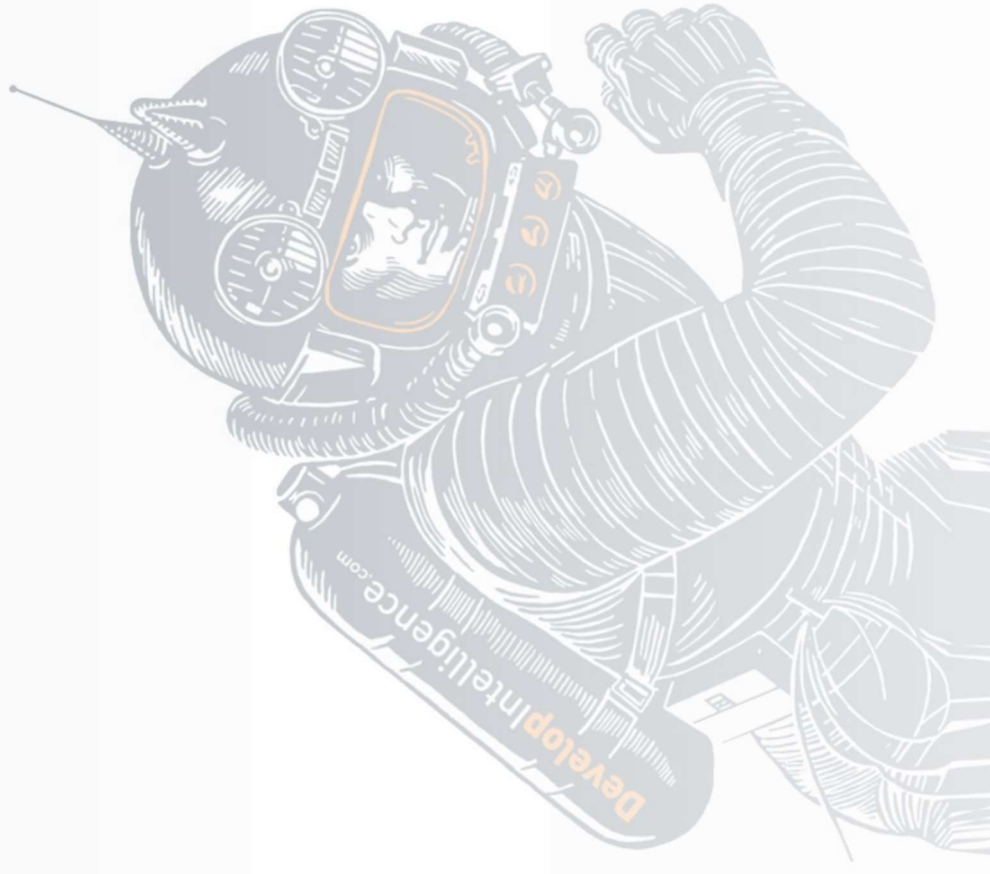


Conclusions

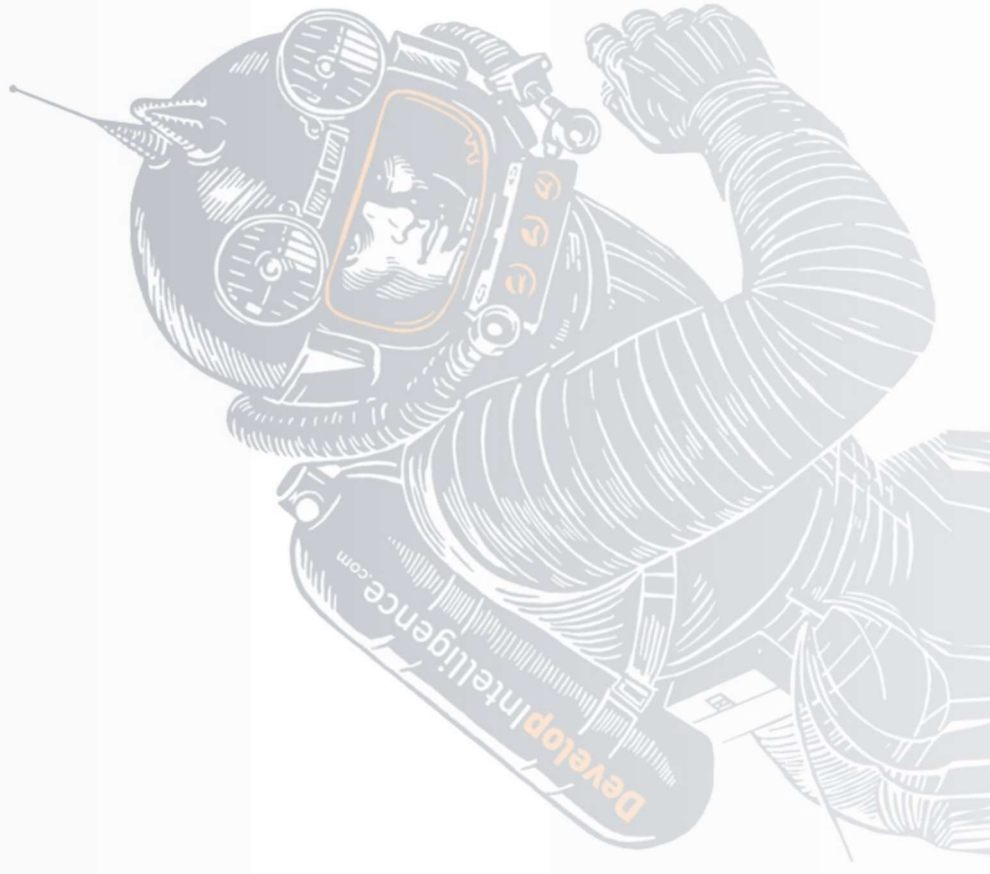
- It doesn't matter if you hate git
- It's complicated
- Memorize what you need
- Look up the rest







Resources





- Pro Git

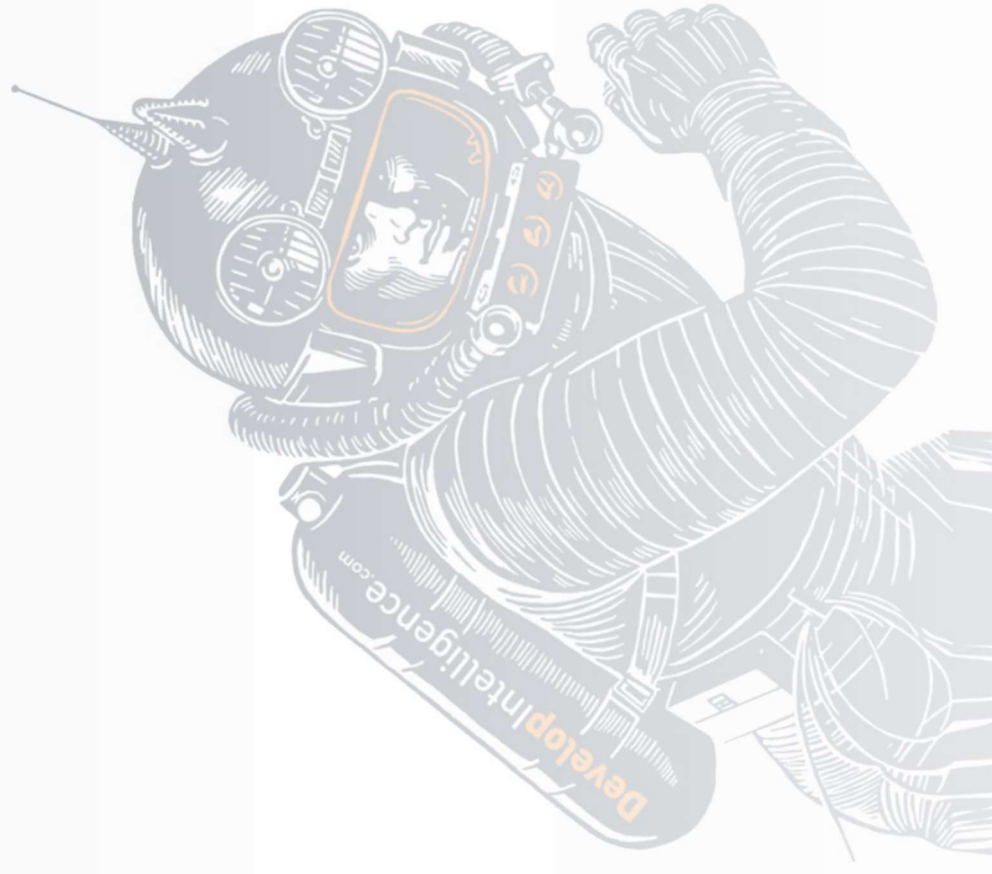




Links

- Googlefu
- Dangit, Git!?!
- Documentation
- Atlassian
- Git How To







Review

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3. Name a few alternatives to git

