

git-fundamentals

A starting point for discovering the wonderful world of Git, GitHub, and Git Annex (Assistant)

Getting the tools / Setup

- Sign up for [github \(https://github.com\)](https://github.com), and **verify your email**.
- Command line tools (you'll need this!):
 - GitHub recommends the [official Git installer \(http://git-scm.com/downloads\)](http://git-scm.com/downloads)
 - I recommend [homebrew \(http://brew.sh\)](http://brew.sh) for hackers on OS X
 - And it's easier to use your package manager (apt, yum, ...) for Unix, etc.
- GUI tools
 - Windows & Mac, also supports hg: [SourceTree \(http://www.sourcetreeapp.com/\)](http://www.sourcetreeapp.com/)
 - Lightweight Mac client: [GitX-dev \(http://rowanj.github.io/gitx/\)](http://rowanj.github.io/gitx/)
 - Lightweight GTK client: [gitg \(https://wiki.gnome.org/Apps/Gitg\)](https://wiki.gnome.org/Apps/Gitg) (get it with your package manager).
 - Integrated with file manager:
 - [TortoiseGit \(https://code.google.com/p/tortoisegit/\)](https://code.google.com/p/tortoisegit/) on Windows
 - [RabbitVCS \(http://rabbitvcs.org/\)](http://rabbitvcs.org/) on Linux (also integrates with gedit)
 - Many [others \(http://git-scm.com/downloads/guis\)](http://git-scm.com/downloads/guis) are available, and you can search for even more!
- Integration for your text editor!
 - Vim [fugitive \(https://github.com/tpope/vim-fugitive\)](https://github.com/tpope/vim-fugitive)
 - [Emacs \(http://www.emacswiki.org/emacs/Git\)](http://www.emacswiki.org/emacs/Git)
 - [Sublime Text 2 \(https://github.com/kemayo/sublime-text-git\)](https://github.com/kemayo/sublime-text-git)
 - gedit (use RabbitVCS)

Awesome resources

- [Basic commands cheat sheet\(s\) \(http://git-scm.com/docs\)](http://git-scm.com/docs) (Note the links to other cheat sheets!)
- [Gamified git \(http://pcottle.github.io/learnGitBranching/\)](http://pcottle.github.io/learnGitBranching/)
- GitHub sponsors [this \(http://try.github.io/\)](http://try.github.io/).
- Where does "help" go from GitHub? [Here \(https://help.github.com/\)](https://help.github.com/).
- @davclark is an awesome resource, himself! (when he's not being a jerk)
- [Linux commands cheat sheet \(http://www.pixelbeat.org/cmdline.html\)](http://www.pixelbeat.org/cmdline.html) (also mostly works for OS X command line).
- [git – the simple guide \(http://rogerdudler.github.io/git-guide/\)](http://rogerdudler.github.io/git-guide/)
- [The visual git guide \(http://marklodato.github.io/visual-git-guide/index-en.html\)](http://marklodato.github.io/visual-git-guide/index-en.html)

Local Git expositors at UC Berkeley

- A problem-focused exploration of git features is available in @jkitzes' [Data](#)

- [Science Lessons \(http://jkitzes.github.io/datasci-lessons/\)](http://jkitzes.github.io/datasci-lessons/)
- [An IPython notebook \(https://github.com/fperez/reprosw/blob/master/Version%20Control.ipynb\)](https://github.com/fperez/reprosw/blob/master/Version%20Control.ipynb) (of course!) from @fperez.
- [Lots of exposition \(http://matthew-brett.github.io/pydagoque\)](http://matthew-brett.github.io/pydagoque) on git + other mostly python stuff and [python scripts for a standardized git workflow \(https://github.com/matthew-brett/gitwash\)](https://github.com/matthew-brett/gitwash) from @matthew-brett.
- [Tons of R code to access public APIs \(http://ropensci.org/packages/index.html\)](http://ropensci.org/packages/index.html) from @karthik and the @rOpenSci team.

Fancy GitHub features

Map diffs are amazing (you may have to click the "rich diff" button as opposed to the raw "<>" button):

- [Explore the history of markers for restaurants \(https://github.com/DU-GIS/Geojson_Data/blob/master/Restaurants.geojson\)](https://github.com/DU-GIS/Geojson_Data/blob/master/Restaurants.geojson)
- [See how congressional redistricting looks \(https://github.com/benbalter/congressional-districts/commit/2233c76ca5bb059582d796f053775d8859198ec5?short_path=85d2c1b#diff-85d2c1b78193e963475250414e57940b\)](https://github.com/benbalter/congressional-districts/commit/2233c76ca5bb059582d796f053775d8859198ec5?short_path=85d2c1b#diff-85d2c1b78193e963475250414e57940b)

CSV diffs are strangely not as good, but (properly formatted) CSV is displayed nicely and is searchable:

- [A tables of S&P 500 securities \(https://github.com/datasets/s-and-p-500-companies/blob/master/data/constituents-financials.csv\)](https://github.com/datasets/s-and-p-500-companies/blob/master/data/constituents-financials.csv)

Git Annex

Read more here: <http://git-annex.branchable.com/>

Forking! What's that?

Forking on github is same as cloning in the command line.

Branching is also very important for collaboration

For branching, you should check the above link for now.