

Git and GitHub



git



github
SOCIAL CODING



Who am I?

Holly Springsteen

Currently

- Full Stack Dev @ IBM Design
- TA @ The Coding Boot Camp at UT Austin

Previously

- Senior Front-End Developer @ Portlight
- PADI Divemaster
- Marine (active 2007 – 2012)



badwolf7



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What's to come

- Git
 - What's Git
 - What's Important
 - Git References
- GitHub
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 - What's Important
 - Housekeeping Tips
- Q&A



Git



git



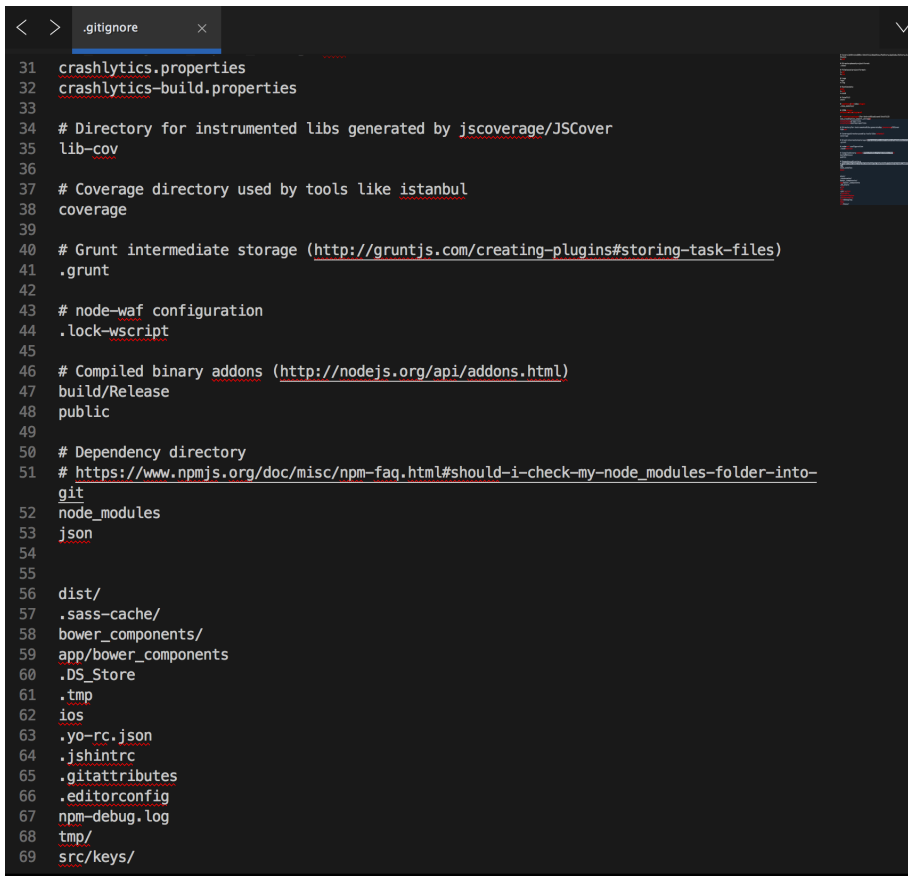
What is Git

- Version Control System
 - a.k.a. source control, source control management, or revision control
 - Command line tool for saving history of file in a project
- Manages files by saving small changes (deltas) over time
 - Take a snap shot (commits) of changes in a repository
 - Can go backwards (roll back) in time and undo mistakes



.gitignore

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

A screenshot of a code editor showing a .gitignore file. The file contains a list of patterns to be ignored by Git, including build artifacts, temporary files, and configuration files. The patterns are listed line by line, with some lines starting with a hash symbol (#) to indicate comments. The editor has a dark theme and a sidebar on the right showing a file tree.

```
31 crashlytics.properties
32 crashlytics-build.properties
33
34 # Directory for instrumented libs generated by jscoverage/JSCover
35 lib-cov
36
37 # Coverage directory used by tools like istanbul
38 coverage
39
40 # Grunt intermediate storage (http://gruntjs.com/creating-plugins#storing-task-files)
41 .grunt
42
43 # node-waf configuration
44 .lock-wscript
45
46 # Compiled binary addons (http://nodejs.org/api/addons.html)
47 build/Release
48 public
49
50 # Dependency directory
51 # https://www.npmjs.org/doc/misc/npm-faq.html#should-i-check-my-node_modules-folder-into-
52 git
53 node_modules
54 json
55
56 dist/
57 .sass-cache/
58 bower_components/
59 app/bower_components
60 .DS_Store
61 .tmp
62 .ios
63 .yo-rc.json
64 .jshinttrc
65 .gitattributes
66 .editorconfig
67 npm-debug.log
68 tmp/
69 src/keys/
```

- Use the .gitignore file to intentionally untrack files
 - Temporary files
 - .DS_Store
 - changelogs
 - keys
 - config files



Git Cheat Sheet

<https://training.github.com/kit/downloads/github-git-cheat-sheet.pdf>

INSTALL GIT

GitHub provides desktop clients that include a graphical user interface for the most common repository actions and an automatically updating command line edition of Git for advanced scenarios.

GitHub for Windows

<https://windows.github.com>

GitHub for Mac

<https://mac.github.com>

Git distributions for Linux and POSIX systems are available on the official Git SCM web site.

Git for All Platforms

<http://git-scm.com>

CONFIGURE TOOLING

Configure user information for all local repositories

```
$ git config --global user.name "[name]"
```

Sets the name you want attached to your commit transactions

```
$ git config --global user.email "[email address]"
```

Sets the email you want attached to your commit transactions

```
$ git config --global color.ui auto
```

Enables helpful colorization of command line output

CREATE REPOSITORIES

Start a new repository or obtain one from an existing URL

```
$ git init [project-name]
```

Creates a new local repository with the specified name

```
$ git clone [url]
```

Downloads a project and its entire version history

MAKE CHANGES

Review edits and craft a commit transaction

```
$ git status
```

Lists all new or modified files to be committed

```
$ git diff
```

Shows file differences not yet staged

```
$ git add [file]
```

Snapshots the file in preparation for versioning

```
$ git diff --staged
```

Shows file differences between staging and the last file version

```
$ git reset [file]
```

Unstages the file, but preserve its contents

```
$ git commit -m "[descriptive message]"
```

Records file snapshots permanently in version history

GROUP CHANGES

Name a series of commits and combine completed efforts

```
$ git branch
```

Lists all local branches in the current repository

```
$ git branch [branch-name]
```

Creates a new branch

```
$ git checkout [branch-name]
```

Switches to the specified branch and updates the working directory

```
$ git merge [branch]
```

Combines the specified branch's history into the current branch

```
$ git branch -d [branch-name]
```

Deletes the specified branch

REFACTOR FILENAMES

Relocate and remove versioned files

```
$ git rm [file]
```

Deletes the file from the working directory and stages the deletion

```
$ git rm --cached [file]
```

Removes the file from version control but preserves the file locally

```
$ git mv [file-original] [file-renamed]
```

Changes the file name and prepares it for commit

SUPPRESS TRACKING

Exclude temporary files and paths

```
*.log  
build/  
temp.*
```

A text file named `.gitignore` suppresses accidental versioning of files and paths matching the specified patterns

```
$ git ls-files --other --ignored --exclude-standard
```

Lists all ignored files in this project

SAVE FRAGMENTS

Shelve and restore incomplete changes

```
$ git stash
```

Temporarily stores all modified tracked files

```
$ git stash pop
```

Restores the most recently stashed files

```
$ git stash list
```

Lists all stashed changesets

```
$ git stash drop
```

Discards the most recently stashed changeset

REVIEW HISTORY

Browse and inspect the evolution of project files

```
$ git log
```

Lists version history for the current branch

```
$ git log --follow [file]
```

Lists version history for a file, including renames

```
$ git diff [first-branch]...[second-branch]
```

Shows content differences between two branches

```
$ git show [commit]
```

Outputs metadata and content changes of the specified commit

REDO COMMITS

Erase mistakes and craft replacement history

```
$ git reset [commit]
```

Undoes all commits after `[commit]`, preserving changes locally

```
$ git reset --hard [commit]
```

Discards all history and changes back to the specified commit

SYNCHRONIZE CHANGES

Register a repository bookmark and exchange version history

```
$ git fetch [bookmark]
```

Downloads all history from the repository bookmark

```
$ git merge [bookmark]/[branch]
```

Combines bookmark's branch into current local branch

```
$ git push [alias] [branch]
```

Uploads all local branch commits to GitHub

```
$ git pull
```

Downloads bookmark history and incorporates changes



Branching

<https://www.atlassian.com/git/tutorials/using-branches>



- Branches are an independent line of development
- Encapsulate changes within a branch
 - Bug Fix
 - New Feature



Git References

- Version Control for Designers
 - <http://blog.teamtreehouse.com/git-for-designers-part-1>
- Git Fundamentals
 - <http://gitimmersion.com>
- Try Git from Code School
 - <http://www.codeschool.com/courses/try-git>
- Git Documentation
 - <http://git-scm.com/documentation>



github

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Get your Octocat at:
<https://octodex.github.com/>



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What is GitHub

- Web-based hosting service for projects that use Git
 - Provides social networking and web hosting for developers
- **GitHub Pages** are web pages hosted and published through GitHub
 - **gh-pages** branch
 - The web pages are viewable at: **username.github.io/reponame/filename**
- **<http://drastudio.github.io/url-generator/>**



GitHub Pages

1) create a new branch called `gh-pages`

`git checkout -b gh-pages`

2) merge your master branch with the new gh-pages branch

`git merge master`

3) push to GitHub

`git push origin gh-pages`

4) switch back to your master branch

`git checkout master`

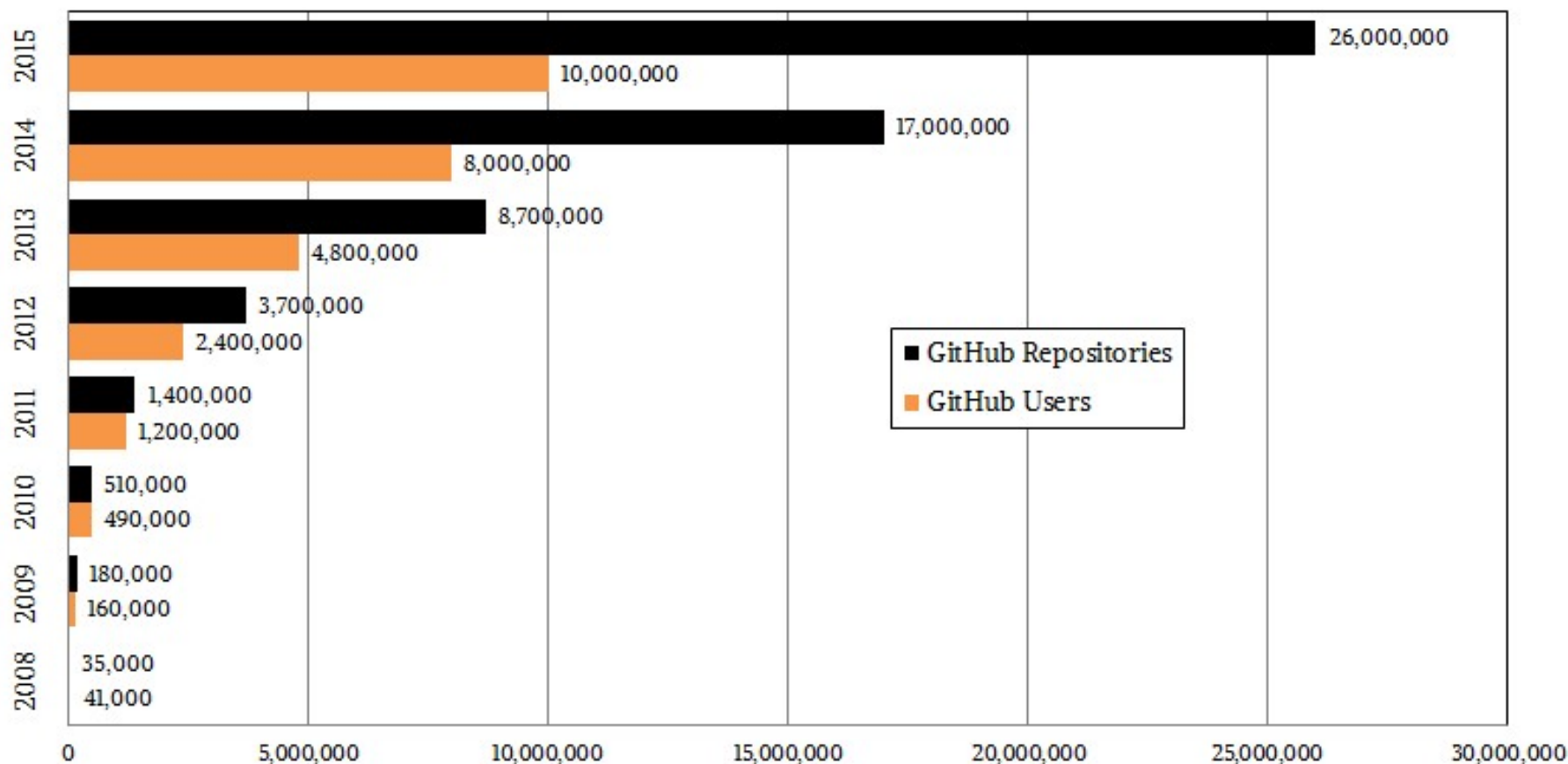
5) check out your repo at:

`username.github.io/reponame/filename`

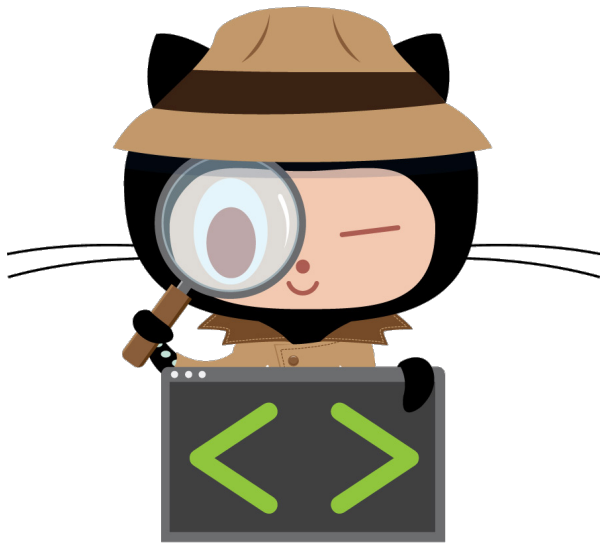
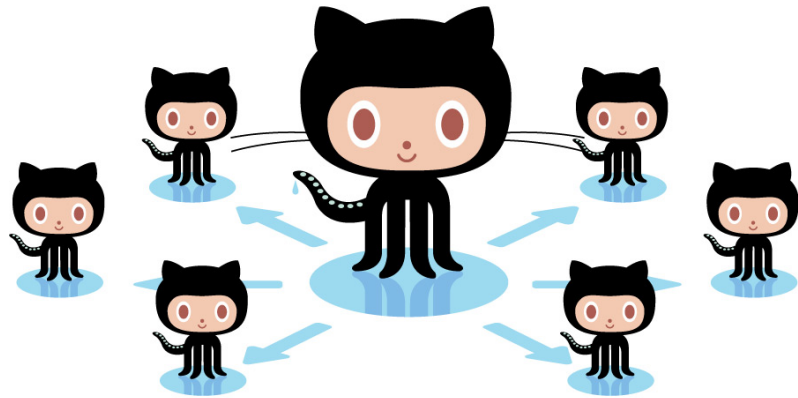


Recruiters Perspective

<http://goo.gl/GNMJav>



Why Do Recruiters Use GitHub



- Sourcing
 - Latest & Greatest
 - Social Coding
 - Stealth Discovery
- Assessment
 - Evidence of Availability
 - Contributions
 - Language Breakdown
 - Passion for Coding
- Contact Information



GitHub Trending Repositories

<https://github.com/trending>

Explore GitHub

Showcases

Integrations

Trending

Stars

Trending in open source

See what the GitHub community is most excited about today.

Repositories

Developers

Trending: today

All languages

Unknown languages

JavaScript

Other: Languages

[joshbучea/HEAD](#)

A list of everything that goes in the <head> of your document

1,188 stars today • Built by 

★ Star

ProTip! Looking for recently updated repositories? [Try this search](#)

[pavelgonchar/colornet](#)


Neural Network to colorize grayscale images

Python • 802 stars today • Built by 

★ Star

[FreeCodeCamp/FreeCodeCamp](#)


The <https://FreeCodeCamp.com> open source codebase and curriculum. Learn to code and help nonprofits.

JavaScript • 556 stars today • Built by 

★ Star

[TeamStuQ/skill-map](#)

StuQ 技能图谱

HTML • 423 stars today • Built by 

★ Star

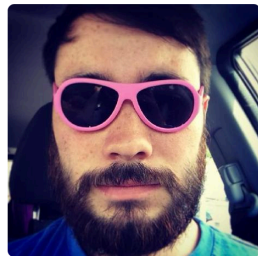


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Example Account

<https://github.com/joshaber>



Josh Abernathy
joshaber

GitHub **STAFF**
 The Gem City
 joshaber@gmail.com
 <http://twitter.com/joshaber>
 Joined on Jun 14, 2008

1.2k Followers
235 Starred
40 Following

Organizations



Contributions Repositories Public activity

Follow

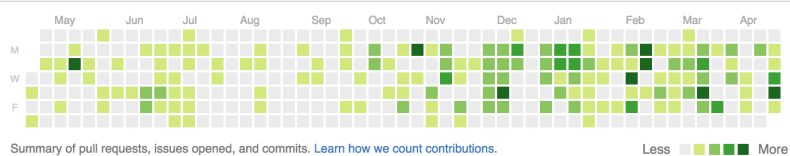
Popular repositories

| | |
|--|-------|
| Few.swift | 807 ★ |
| Views as functions of their state. | |
| SwiftBox | 648 ★ |
| Flexbox in Swift, using Facebook's css-layout. | |
| clojurem | 291 ★ |
| Clojure to Objective-C compiler | |
| JAListView | 262 ★ |
| An NSTableView replacement that doesn't suck. | |
| MacShairport | 163 ★ |
| A native Mac Shairport implementation | |

Repositories contributed to

| | |
|---|----------|
| atom/atom | 26,943 ★ |
| The hackable text editor | |
| libgit2/objective-git | 829 ★ |
| Objective-C bindings to libgit2 | |
| nodegit/nodegit | 1,839 ★ |
| Native Node bindings to Git. | |
| atom/status-bar | 54 ★ |
| Status bar for Atom | |
| github/ohnogit | 4 ★ |
| For when you have to use git in nodejs. | |

Public contributions



Contributions in the last year
1,342 total
Apr 22, 2015 – Apr 22, 2016

Longest streak
7 days
July 1 – July 7

Current streak
5 days
April 18 – April 22

Contribution activity

Period: **1 week**

69 commits



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Core Activity

The screenshot shows the jQuery GitHub repository page. Red circles and arrows highlight key areas of core activity:

- Repository Name:** A red circle around "jquery / jquery" with an arrow pointing to the central text.
- Activity Summary:** A red circle around the summary bar showing "5,490 commits", "8 branches", "107 releases", and "186 contributors".
- Engagement:** A red circle around the "Star", "Fork", and "Contributors" counts with an arrow pointing to the central text.

Central text: **All the activity related to this repository**

Repository details: jQuery JavaScript Library <http://jquery.com/>

Branch: master | jquery /

| File | Description | Time Ago |
|-----------------|--|---------------|
| build | Release: Publish to npm | 7 days ago |
| speed | Edited comments and minor adjustments. Fixes #13553. Closes gh-1195. | 10 months ago |
| src | Traversing: Check all pairwise element combinations for .find(els) | 19 hours ago |
| test | Traversing: Check all pairwise element combinations for .find(els) | 19 hours ago |
| .bowerrc | Explicitly set bower folder location | 5 months ago |
| .editorconfig | Update .editorconfig with new properties. Close gh-915. | a year ago |
| .gitattributes | Mark *.jar files as binary. | 3 years ago |
| .gitignore | Build: Use absolute paths in .gitignore and .npmignore. | a month ago |
| .jscs.json | Manage bower dependencies with grunt-bowercopy | a month ago |
| .jshintignore | Manage bower dependencies with grunt-bowercopy | a month ago |
| .jshintrc | Update jshintrc to conform to new style guide. Conform to onevar and ... | 9 months ago |
| .mailmap | Authors: Update AUTHORS.txt and .mailmap | 7 days ago |
| .npmignore | Build: Use absolute paths in .gitignore and .npmignore. | a month ago |
| .travis.yml | Use grunt and bower packages as local dependencies. Close gh-1433. | 2 months ago |
| AUTHORS.txt | Authors: Update AUTHORS.txt and .mailmap | 7 days ago |
| CONTRIBUTING.md | Docs: Link to the browser support page in CONTRIBUTING.md | 11 days ago |
| Gruntfile.js | Sizzle: update committed dependencies | 4 days ago |

Right sidebar options: Code, Pull Requests (14), Wiki, Pulse, Graphs, Network, HTTPS clone URL, Clone in Desktop, Download ZIP.



Stars and Forks

- Starring
 - <https://help.github.com/articles/about-stars/>
 - Create a bookmark for easier access
 - Show appreciation to the repo maintainer
 - Your Starred Repos: <https://github.com/stars>
- Forking
 - <https://help.github.com/articles/fork-a-repo/>
 - Copy a repo and experiment without making changes to the repo itself
 - Propose changes for bug fixes with pull requests
 - Use someone else's repo as a starting point for your own project



Housekeeping Tips

- README === Documentation
- Maintain well commented code
- Consistent indentation / readability
- Deploy your repos & include links



Questions? Answers? Comments?

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