

Git&**GitHub**
secrets



```
git branch -D local-branch  
git push origin :local-branch
```

Much like
James Cameron's AvatarTM,
Git doesn't make any
goddamn sense

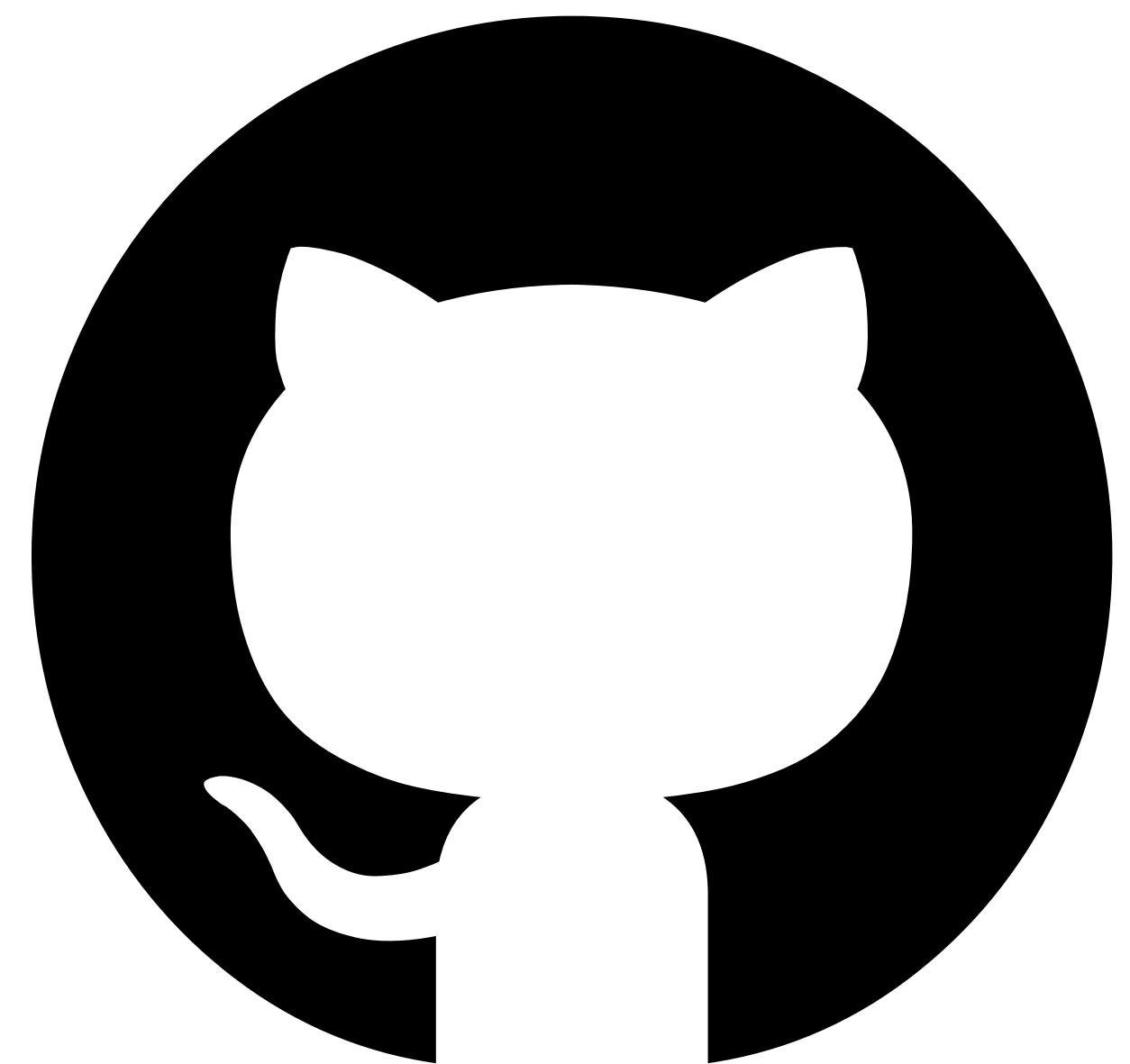
This talk throws
a ton of stuff at you

This talk throws
a ton of stuff at you

(Not unlike James Cameron's *Avatar*TM, btw)

Learn the bits that make you
more productive





Git & GitHub
secrets

merge strategies

merge strategies



strategy defaults:

one head:	recursive
multiple heads:	octopus

merge strategies



git merge master -s **strategy**

merge strategies



git merge master -s ours

merge strategies



`git merge master -s ours`

“Give me master, but my final state
should match my current branch”

merge strategies



`git merge master -s ours`

Great for when your long-running
branch will supersede master

merge strategies



```
git merge master \
-s recursive
```

merge strategies



```
git merge master \
-s recursive -X patience
```

Better line matching for logical groups

merge strategies – patience

• • • • • • •

```
{  
  :a => :b  
}
```

merge strategies – patience

• • • • • • •

```
{  
  :a => :b  
}
```

```
{  
  :c => :d  
}
```

merge strategies – patience

```
{  
  :a => :b  
  +}  
+  
+{  
+  :c => :d  
}
```



merge strategies – patience

```
{  
  :a => :b  
}
```

```
+{  
+  :c => :d  
+}  
+
```

merge strategies



```
git merge master \
-s recursive -X patience
```

Can also set as a global option

merge strategies



```
> man git-merge  
# look at “Merge Strategies”
```

The
second-order-diff
trick

the second-order-diff trick



Tom Moertel

(cl.ly/QNaG)

the second-order-diff trick



Goal: transform strings
with a regex in project

the second-order-diff trick



Approach: re-run `git diff` and `git reset` until the regex is correct

the second-order-diff trick



Problem: it sucks to
review the diff each time

the second-order-diff trick



Solution: stash, then
diff against **stash{0}**

the second-order-diff trick



```
> git status  
# clean
```

the second-order-diff trick



```
> ./run-regex-script
```

the second-order-diff trick



```
> git diff  
# review and check output
```

the second-order-diff trick



```
> git stash  
# stash your reviewed diff
```

the second-order-diff trick



```
> ./run-regex-script
```

the second-order-diff trick



```
> git diff stash{0}  
# only incremental changes
```

the second-order-diff trick



Find and replace in projects
without worrying

emoji diffs

emoji diffs



Yeah this is
important

emoji diffs



Git diffs
unicode poorly:

emoji diffs

• • • • • •

```
@@ -1 +1 @@
-MINDLESS COUPLE ABOUT TO BEHEAD CHILD
+<U+1F46A>
```

emoji diffs



Git uses less
as its pager

emoji diffs

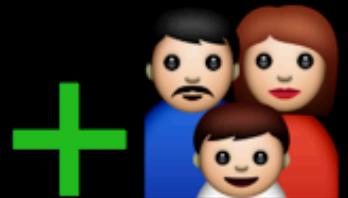


git --no-pager diff

emoji diffs

• • • • • •

@@ -1 +1 @@
-MINDLESS COUPLE ABOUT TO BEHEAD CHILD

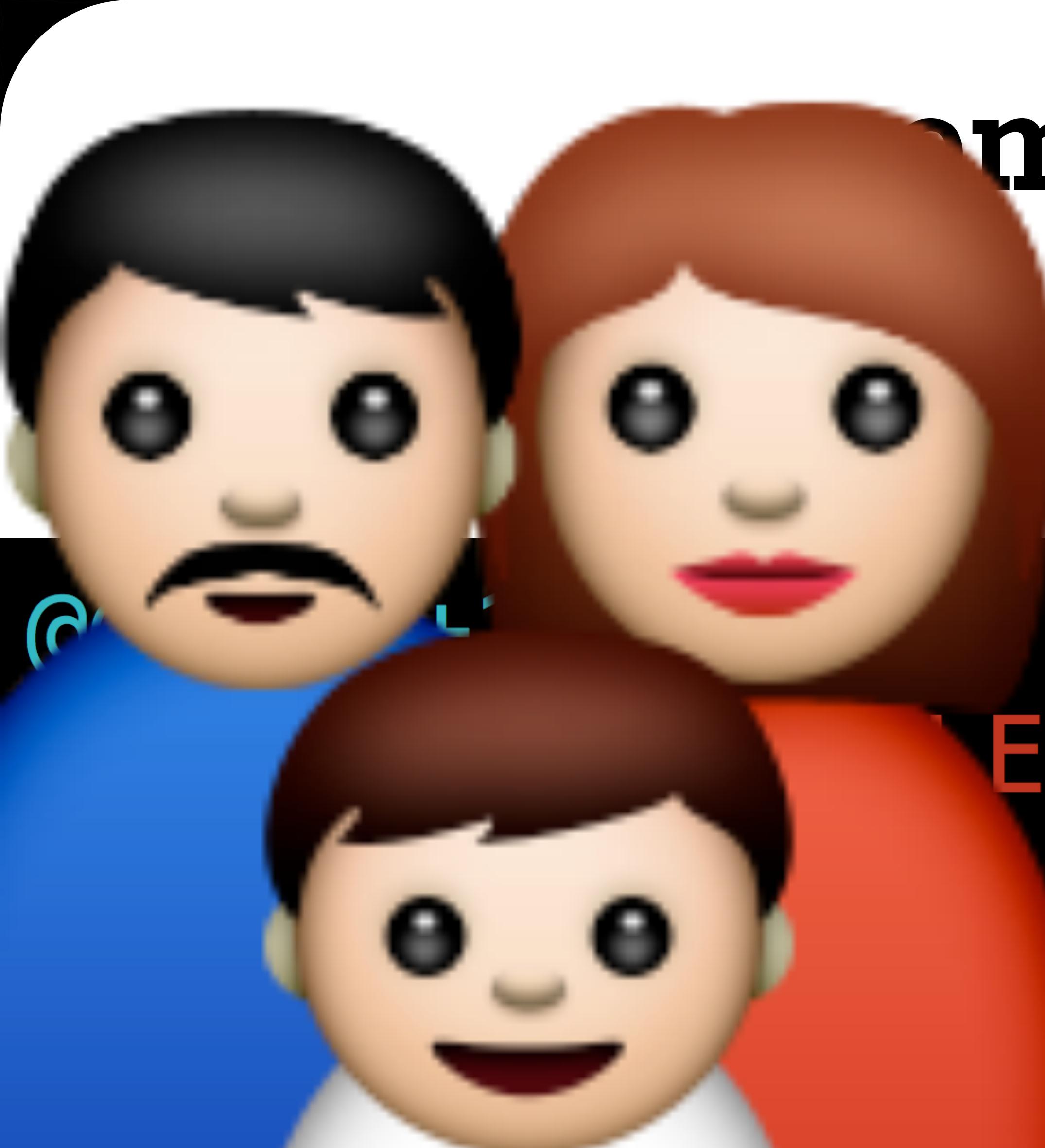


emoji diffs

• • • • • •



emoji diffs



• • • • • •

WE ABOUT TO BEHEAD CHILD



ffs

TO BEHEAD CHILD

git strip-space

git strip-space



Fixes horrible coworkers
and contributors

git strip-space



Strips trailing whitespace,
collapses newlines,
adds a final newline

git strip-space



git strip-space <file>

git strip-space



```
echo "hi\n" | git strip-space
```

git strip-space



Run this in your editor
after file saves

`git diff --check`

git diff --check



Fixes horrible you.

git diff --check

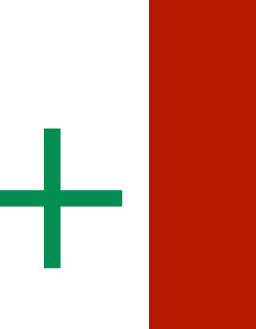


run.sh:1: trailing whitespace.
+echo “hi” 

git diff --check



run.sh:1: space before tab in indent.



ls -la

git diff --cached

`git diff --cached`



`git diff` only diffs unstaged changes

`git diff --cached`



Shows staged
(but uncommitted)
changes

**HOT, HOT,
TRIVIA
BREAK**

Which of these
commit messages
actually happened
on GitHub?

1. A reasoned argument,
citing sources
2. A 500MB db dump

1. A reasoned argument,
citing sources
2. A 500MB db dump

“Why is my
repository slow?”

git merge --abort

`git merge --abort`



Aborts a conflicted merge

`git merge --abort`



Resets your tree

```
git merge -m "message"
```

`git merge -m`



Like `commit -m` but
populates the merge
commit

`git merge --no-commit`

`git merge --no-commit`



Merges without a
commit message

git status --ignored

`git status --ignored`



Showsthe status of
everything you're
ignoring

--assume-unchanged

--assume-unchanged



**Temporarily
ignore a file**

--assume-unchanged

.....

```
git update-index \
--assume-unchanged \
path_to_file
```

--assume-unchanged

.....

git update-index \

**--no-assume-unchanged **

path_to_file

proper messages

proper messages



Linus has thoughts on
your **commit messages**

proper messages



git commit -m “fixes shit”

proper messages



git commit -m “fixes shit”
is not what he had in mind

proper messages



A good commit has:

proper messages



Short summary (title)

proper messages



Short summary (title)

< 50c

proper messages



Short summary (title)

< 50c

A longer description of
the change follows.

proper messages



Short summary (title)

< 50c

A longer description of
the change follows.

wrap at 72c

proper messages



yay a commit message look at how cool i am with my commit message let me talk a bunch because i think i deserve it

```
# Please enter the commit message for your changes. Lines starting
# with '#' will be ignored, and an empty message aborts the commit.
# On branch v3
# You are currently editing a commit while rebasing branch 'master' on '4628474'.
#   (use "git commit --amend" to amend the current commit)
#   (use "git rebase --continue" once you are satisfied with your changes)
#
# Changes to be committed:
#   (use "git reset HEAD <file>..." to unstage)
```

proper messages



git-commit helps you
write perfect messages

proper messages



Just keep typing until you notice your text changes colors

```
# Please enter the commit message for your changes. Lines starting
# with '#' will be ignored, and an empty message aborts the commit.
# On branch v3
# You are currently editing a commit while rebasing branch 'master' on
#   (use "git commit --amend" to amend the current commit)
#   (use "git rebase --continue" once you are satisfied with your change)
#
```

proper messages

• • • • •

50c

Just keep typing until you notice your text changes colors

```
# Please enter the commit message for your changes. Lines starting
# with '#' will be ignored, and an empty message aborts the commit.
# On branch v3
# You are currently editing a commit while rebasing branch 'master' on
#   (use "git commit --amend" to amend the current commit)
#   (use "git rebase --continue" once you are satisfied with your change)
#
```

proper messages



Just keep typing until you notice your text changes colors

From this point on you can type a normal description and, lo and behold, it's going to word wrap you just the way you like it. See? Doesn't that make you feel all warm and fuzzy and shit inside of your body?

```
# Please enter the commit message for your changes. Lines starting
# with '#' will be ignored, and an empty message aborts the commit.
# On branch v3
# You are currently editing a commit while rebasing branch 'master' on
#   (use "git commit --amend" to amend the current commit)
#   (use "git rebase --continue" once you are satisfied with your changes)
#
```

proper messages

• • • • •

wraps at 72c

Just keep typing until you notice your text changes colors

From this point on you can type a normal description and, lo and behold, it's going to word wrap you just the way you like it. See? Doesn't that make you feel all warm and fuzzy and shit inside of your body?

```
# Please enter the commit message for your changes. Lines starting
# with '#' will be ignored, and an empty message aborts the commit.
# On branch v3
# You are currently editing a commit while rebasing branch 'master' on
#   (use "git commit --amend" to amend the current commit)
#   (use "git rebase --continue" once you are satisfied with your changes)
#
```

proper messages



Assumes your
\$EDITOR is vim

proper messages



```
export EDITOR=vim
```

proper messages



Assumes you have
syntax highlighting on

proper messages



syntax on

~/.vimrc

proper messages



Assumes you have
plugin indenting on

proper messages



filetype indent plugin on

~/.vimrc

Git & GitHub
secrets

canonical URLs

GitHub, Inc.  github.com/play/play/blob/master/README.md

This repository  Search or type a command  Explore Gist Blog Help holman   

PUBLIC  [play / play](#)  Unwatch  Unstar 1,322  Fork 172

branch: [master](#)  [play / README.md](#) 

 kevinsawicki a year ago Update Android application screenshot

7 contributors 

 file | 240 lines (144 sloc) | 8.411 kb  Edit  Raw  Blame  History  Delete

Play

Play is an employee-powered iTunes-based client-driven distributed music server for your office. Also it can prepare your taxes.

Background

Did you know that listening to music while you work produces better and faster code? It's true. It's in a README.

We listen to music constantly at GitHub. So I wrote Play. Initially it was a modest shell-oriented music server, but we've since grown it to quite the setup:

GitHub, Inc.  github.com/play/play/blob/master/README.md

This repository Search or type a command  Explore Gist Blog Help holman   

PUBLIC  [play / play](#)  Unwatch  Unstar 1,322  Fork 172

branch: master  [play / README.md](#) 

 kevinsawicki a year ago Update Android application screenshot

7 contributors 

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 Reader

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GitHub, Inc.  github.com/play/play/blob/master/README.md Reader

This repository Search or type a command Explore Gist Blog Help

Public  play / play

branch: master play / README.md 

 kevinsawicki a year ago Update Android application screenshot

7 contributors 

 GitHub, Inc.  github.com/play/play/blob/master/README.md

 Reader

Play

Play is an employee-powered iTunes-based client-driven distribution system for your music. All you have to do is press play.

Background

press 

Did you know that listening to music while you work produces better and faster code? It's true. It's in a README.

We listen to music constantly at GitHub. So I wrote Play. Initially it was a modest shell-oriented music server, but we've since grown it to quite the setup:

GitHub, Inc.  github.com/play/play/blob/master/README.md Reader

This repository Search or type a command Explore Gist Blog Help

Public  play / play

branch: master play / README.md 

 kevinsawicki a year ago Update Android application screenshot

7 contributors 

 GitHub, Inc.  github.com/play/play/blob/64e687437a895758edb5a4f8642935dd1cf2504c/README.md  Reader

Play

Play is an employee-powered iTunes-based client-driven distribution system for your music. Also, it can upscale your music.

Background

press

Did you know that listening to music while you work produces better and faster code? It's true. It's in a README.

We listen to music constantly at GitHub. So I wrote Play. Initially it was a modest shell-oriented music server, but we've since grown it to quite the setup:



This repository

GitHub, Inc.  github.com/play/play/blob/64e687437a895758edb5a4f8642935dd1cf2504c/README.md ReaderPublic  play / play Unwatch Unstar

1,322

 Fork

172

This page
won't change,
even if the branch does

Background

Did you know that listening to music while you work produces better and faster code? It's true. It's in a README.

We listen to music constantly at GitHub. So I wrote Play. Initially it was a modest shell-oriented music server, but we've since grown it to quite the setup:

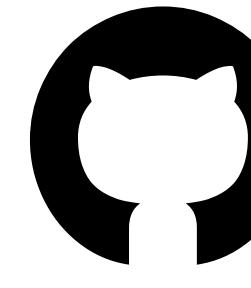
curlable
public keys

[https://!\[\]\(f69f3a51f7f858673731e887ffd3bfeb_img.jpg\) holman.keys](https://github.com/holman.keys)



...

Plaintext,
non-authed
access to public keys



/user.keys

• • • • • •

**Programmatically
add SSH keys**

fetching pulls

fetching pulls



Accepting a Pull Request:
Add a remote, fetch branch, merge

fetching pulls



Lots of **boring** commands

fetching pulls



GitHub stores all Pull Requests
in your repository

fetching pulls



This means we can track code
even if the **fork** is deleted

fetching pulls



You can abuse this, too!

fetching pulls



```
git fetch origin pull/id/head:name
```

fetching pulls



```
git fetch origin pull/12/head:pr
```

fetching pulls



git fetch origin pull/12/head:pr
fetches Pull Request #12 into a
branch named “pr”

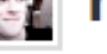
fetching pulls



Automate this within
helper scripts or an alias

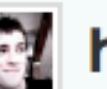
live updates

	holman	Hook up JavaScript again	eu2c8e
	holman	Remove scaffolded css	f199c60
	holman	Make sure errors get cleared	✓ 6199391

**holman**

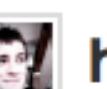
hook up javascript again

euzcuse

**holman**

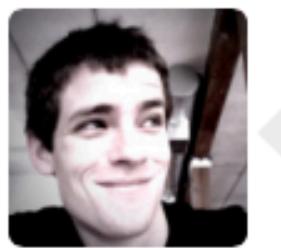
Remove scaffolded css

f199c60

**holman**

Make sure errors get cleared

✓ 6199391

 **holman** commented

2 months ago

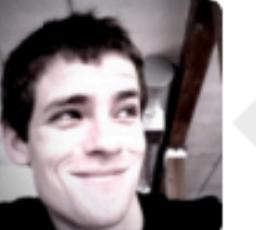


Probably finna merge after lunch.

	holman	Hook up JavaScript again	eu2case
	holman	Remove scaffolded css	f199c60
	holman	Make sure errors get cleared	✓ 6199391

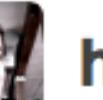
 **holman** commented 2 months ago  

Probably finna merge after lunch.

  **holman** referenced this pull request from a commit 2 months ago

 **holman** Merge pull request #262 from play/v3-rails ... 6fb63e1

Merged  **holman** merged commit 6fb63e1 into v3 from v3-rails 2 months ago

Closed  **holman** closed the pull request 2 months ago

Deleted  **holman** deleted the v3-rails branch 2 months ago **Restore**

	holman	Hook up JavaScript again	eu2case
	holman	Remove scaffolded css	f199c60
	holman	Make sure errors get cleared	✓ 6199391



holman commented 2 months ago

Probably finna merge after lunch.



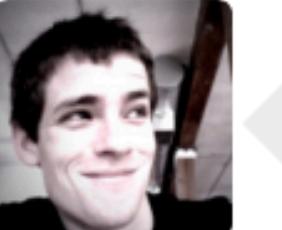
I ← **holman** referenced this pull request from a commit 2 months ago

holman Merge pull request #262 from play/v3-rails ... 6fb63e1

Merged  **holman** merged commit 6fb63e1 into v3 from v3-rails 2 months ago

Closed  **holman** closed the pull request 2 months ago

Deleted  **holman** deleted the v3-rails branch 2 months ago **Restore**



holman commented 2 months ago

I had lunch.

**HOT, HOT,
TRIVIA
BREAK**

**Most frequent
Emoji used on
Github:**

#5

:clap:



#4

:+1:



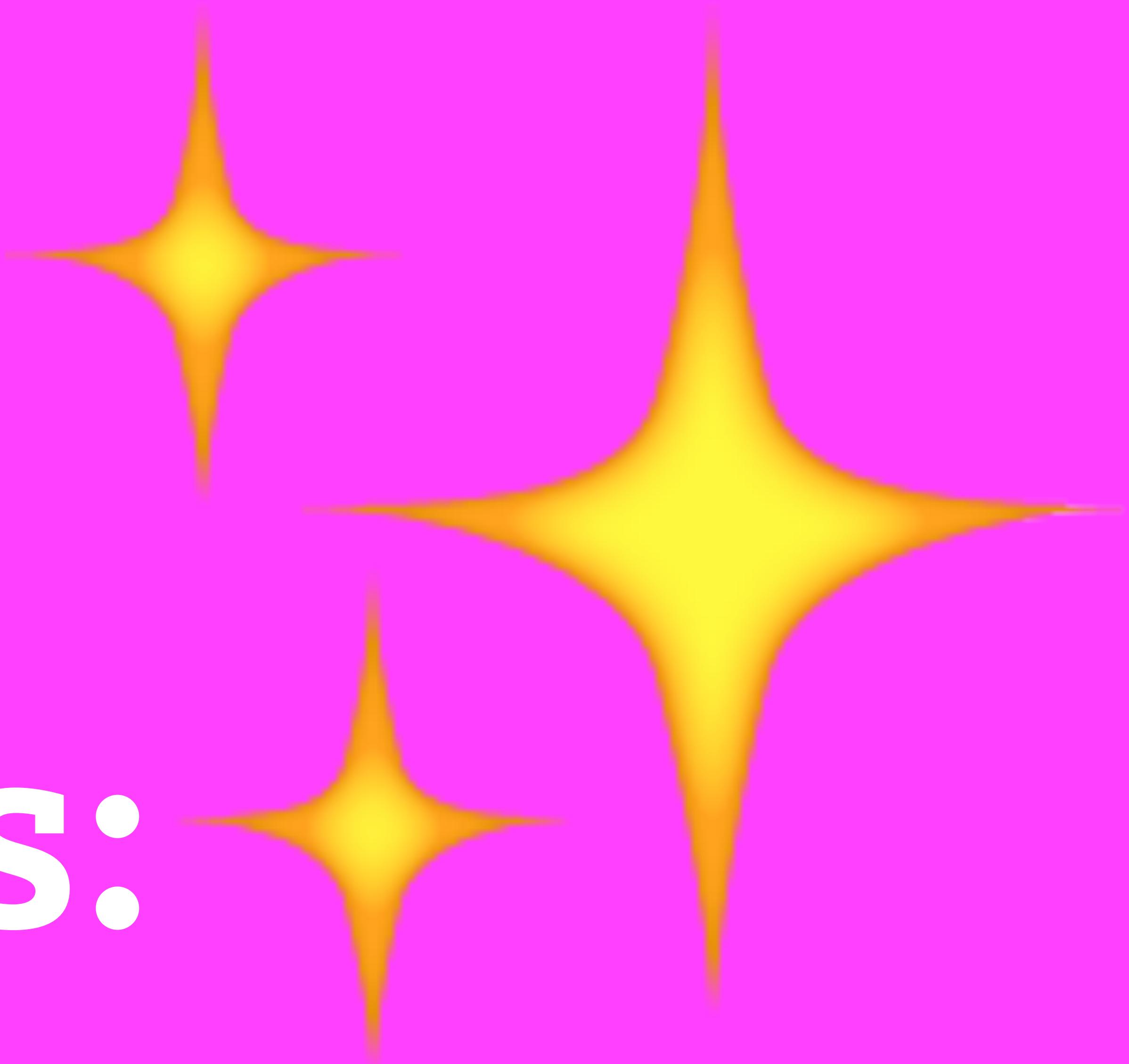
#3

: -1 :



#2

:sparkles:



#1

:shipit:

quick quotes

quick quotes

• • • • •

Markdown uses >
for blockquotes

quick quotes

• • • • • •



defunkt opened this issue a minute ago

Edit

An issue

No one is assigned



No milestone



Um, he's sick. My best friend's sister's boyfriend's brother's girlfriend heard from this guy who knows this kid who's going with the girl who saw Ferris pass out at 31 Flavors last night. I guess it's pretty serious.

1 participant



Write

Preview

Comments are parsed with [GitHub Flavored Markdown](#)

> Um, he's sick. My best friend's sister's boyfriend's brother's girlfriend heard from this guy who knows this kid who's going with the girl who saw Ferris pass out at 31 Flavors last night. I guess it's pretty serious.

quick quotes



Highlight and press 

quick quotes

• • • • • •



defunkt opened this issue 2 minutes ago

Edit

An issue

No one is assigned



No milestone



Um, he's sick. My best friend's sister's boyfriend's brother's girlfriend heard from this guy who knows this kid who's going with the girl who saw Ferris pass out at 31 Flavors last night. I guess it's pretty serious.

1 participant



Write

Preview

Comments are parsed with [GitHub Flavored Markdown](#)

Leave a comment



quick quotes

• • • • • •



defunkt opened this issue 2 minutes ago

Edit

An issue

No one is assigned



No milestone



Um, he's sick. My best friend's sister's boyfriend's brother's girlfriend heard from this guy who knows this kid who's going with the girl who saw Ferris pass out at 31 Flavors last night. I guess it's pretty serious.

1 participant



Write

Preview

Comments are parsed with [GitHub Flavored Markdown](#)

> Um, he's sick. My best friend's sister's boyfriend's brother's girlfriend heard from this guy who knows this kid who's going with the girl who saw Ferris pass out at 31 Flavors last night. I guess it's pretty serious.

browse stars

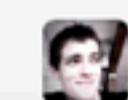
<http://github.com/stars/brianmario>



Search or type a command



Explore Gist Blog Help



holman



brianmario (Brian Lopez) / starred

[Unfollow](#)

303

All Stars

709

Search starred repositories...

Sort: Recently starred ▾

Your repositories 0

Others' repositories 709

Filter by languages

Ruby 413

C 0

JavaScript 96

C++ 17

Objective-C 12

Python 10

C# 9

Erlang 7

PHP 5

Java 5

CoffeeScript 4

Shell 3

Go 2

Scala 2

[charliesome/racer](#) Starred a year ago

A high performance Ruby web server

[Star](#)[mruby/mruby](#) Starred a year ago

Lightweight Ruby

[Star](#)[neelance/ffi-gen](#) Starred a year ago

A generator for Ruby FFI bindings, directly from header files via LLVM's Clang compiler

[Star](#)[ohler55/oj](#) Starred a year ago

Optimized JSON

[Star](#)[fdr/redrat](#) Starred 2 years ago

Ruby and Python speak C.

[Star](#)[methodmissing/jio](#) Starred 2 years ago

jio - transactional, journaled file I/O for Ruby

[Star](#)[vmg/houdini](#) Starred 2 years ago

The Escapist

[Star](#)

web flow

web flow



You can do a lot without
leaving the **browser**

web flow



Documentation, prose,
quick fixes, switching
away from nosql

web flow

• • • • • •

A screenshot of a web-based Git interface. At the top, there's a header with a green icon, a dropdown menu showing "branch: master", and a blue folder icon labeled "dotfiles / +". Below the header, a modal dialog box is open. The dialog has a title "Switch branches/tags" with a close button. Inside the dialog, there's a text input field containing "add-gitignore" which is highlighted with a blue border. Below the input field are two tabs: "Branches" (which is selected) and "Tags". At the bottom of the dialog is a large blue button with white text that says "Create branch: add-gitignore from 'master'". In the background, to the right of the dialog, there are two "commit" buttons. At the very bottom left, there's a "README.md" file icon.

web flow

• • • • •



branch: **add-gitignore** ▾

dotfiles / A blue rectangular icon with a white plus sign in the center.

Create a new file here

web flow

• • • • • •

dotfiles / .gitignore

or cancel

Want to use a .gitignore template?

Choose .gitignore: Ruby ▾



2 No wrap

```
1 *.gem
2 *.rbc
3 .bundle
4 .config
5 coverage
6 InstalledFiles
7 lib/bundler/man
8 pkg
9 rdoc
10 spec/reports
11 test/tmp
12 test/version_tmp
13 tmp
14
15 # YARD artifacts
16 .yardoc
17 _yardoc
18 doc/
```

web flow



⌚ Your recently pushed branches:

 Compare & pull request

[add-gitignore](#) (less than a minute ago)

web flow



You can add more commits to this pull request by pushing to the **add-gitignore** branch on **defunkt/dotfiles**



This pull request can be automatically merged.
You can also merge branches on the [command line](#).

 [Merge pull request](#)

web flow



Pull request successfully merged and closed

You're all set—the [add-gitignore](#) branch can be safely deleted.

 [Delete branch](#)

web flow



Frees you from git clone

issue autocomplete

issue autocomplete



Type **#**, get a search



Title

No one is assigned



No milestone



Write

Preview

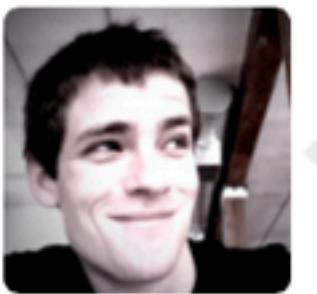
Comments are parsed with [GitHub Flavored Markdown](#)

We broke something in



Attach images by dragging & dropping or [selecting them](#).

[Submit new issue](#)



Title

No one is assigned



No milestone



Write

Preview

Comments are parsed with [GitHub Flavored Markdown](#)

We broke something in #

#2 ★

#89 **pjax**

#v3 **v3**

#19 **Travis**

#193 **Autodj**

Attach images by dragging & dropping or [selecting them](#).

[Submit new issue](#)



Title

No one is assigned



No milestone



Write

Preview

Comments are parsed with [GitHub Flavored Markdown](#)

We broke something in #rail

#280 **Rails 4**

#293 **V3 api rails**

#279 Use Rails URL helpers

#210 **404 on redirect to API login**

#126 **gem rb-fsevent fail to build native extension**

Attach images by dragging & dropping or [selecting them](#).

[Submit new issue](#)



Title

No one is assigned



No milestone



Write

Preview

Comments are parsed with [GitHub Flavored Markdown](#)

We broke something in #280



Attach images by dragging & dropping or [selecting them](#).

[Submit new issue](#)

repo redirects

repo **redirects**



Rename your repository
and GitHub will redirect
old URLs

in-repo licensing

Initialize this repository with a README

This will allow you to git clone the repository immediately.

Add .gitignore: **None** ▾

Add a license: **None** ▾ (i)

Create repository

Licenses

Filter licenses...

GPL v2

✓ MIT License

Affero GPL

Artistic License 2.0

in-repo licensing

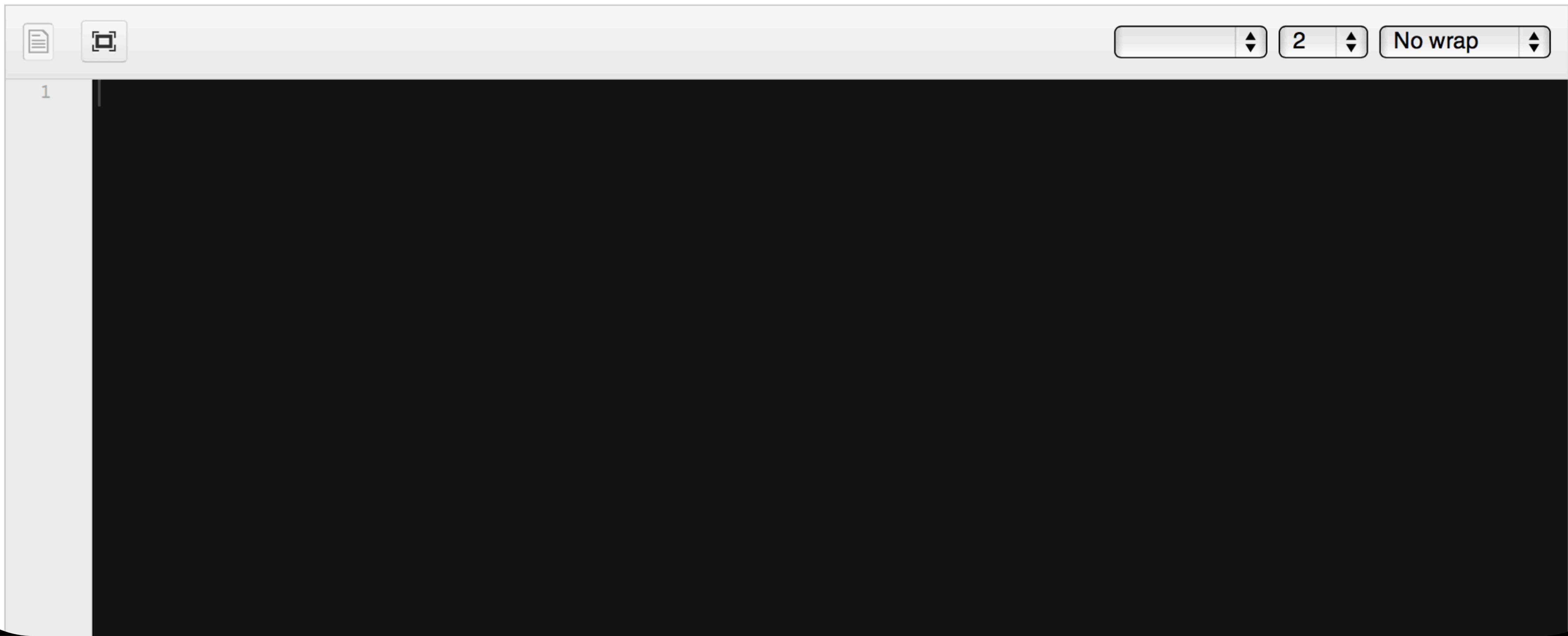


You can add licenses to
existing repos, too

in-repo licensing

• • • • • • •

dotjs / Name your file... or cancel



in-repo licensing

• • • • • • •

The screenshot shows a software interface for managing licenses. At the top left, there's a navigation bar with 'dotjs' and a path 'LICENSE' in bold, followed by 'or cancel'. To the right, a message says 'Want to use a template?' with a dropdown menu set to 'Choose a license: None'. A small info icon is also present.

The main area features a large text input field with a placeholder '1' and a black redaction box. Above the input field are two icons: a document and a camera.

To the right of the input field is a modal window titled 'License'. It contains a search bar with 'Filter licenses...' and a list of license options. The 'MIT License' option is highlighted with a blue background and a checked checkbox icon.

- Apache v2 License
- GPL v2
- ✓ MIT License**
- Affero GPL
- Artistic License 2.0
- BSD (3-Clause) License
- BSD 2-Clause license
- Eclipse Public License v1.0
- GPL v3

in-repo licensing



(also works for `.gitignore`)

file finder

file finder



Type **t**, find in project

file finder

...



holman / **boom**

Unwatch ▾ 18

Unstar 661

Fork 84

boom / .md

- [README.md](#)
- [LICENSE.md](#)
- [CHANGELOG.md](#)
- [completion/README.md](#)



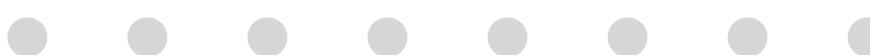
task lists

task lists



Use issues and pulls as
todo lists

task lists



- [] Use NoSQL
- [] Use today's trendiest language
- [] Do what our VC tells us
- [] Comment on Hacker News
- [] Profit

task lists



holman opened this pull request a minute ago

Make a successful startup

No one is assigned 

No milestone 

Use NoSQL

Use today's trendiest language

Do what our VC tells us

Comment on Hacker News

Profit

Edit

task lists



holman opened this pull request 2 minutes ago

Make a successful startup

No one is assigned 

No milestone 

Use NoSQL

Use today's trendiest language

Do what our VC tells us

Comment on Hacker News

Profit

Edit

task lists



- [x] Use NoSQL
- [x] Use today's trendiest language
- [x] Do what our VC tells us
- [x] Comment on Hacker News
- [] Profit

task lists

• • • • •

Open

Closed

Sort: Newest ▾



Make a successful startup

#2

5 tasks (4 completed, 1 remaining)

by holman 7 minutes ago



haha-business!

fork URLs

fork URLs

• • • • •



Fork

84



This repository

Search or type a command



Explore Gist Blog Help



holman



PUBLIC



holman / boom

Watch

18

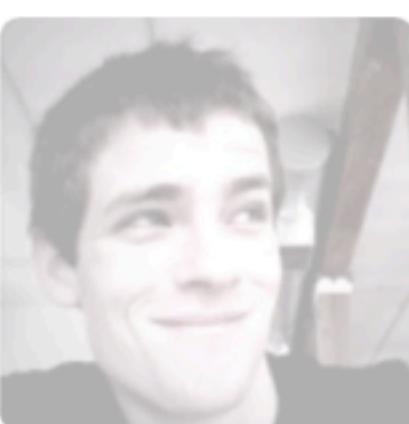
Unstar

656

Fork

84

Where should we fork this repository?



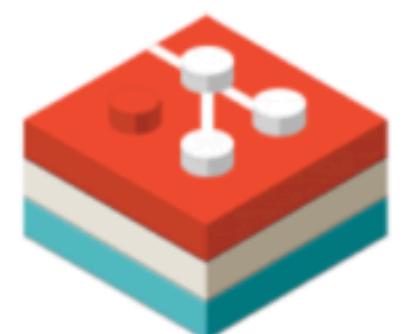
@holman



@github



@play



@libgit2

Motherfucking TEXT SNIPPETS! On

348 commits

branch: master

boom / E

bump changelog

holman authored 7 days ago

bin

add magic e

633d71

years ago

completion

Fix bash con

years ago

lib

Change copy

days ago

test

Add a test

days ago

.gitignore

this shouldn't be a project-level declaration

3 years ago

.ruby-version

Designed for 1.9

4 months ago

.travis.yml

disable email notifications

4 months ago

CHANGELOG.md

bump changelog

7 days ago

Gemfile

bundler

2 years ago

Gemfile.lock

Use yajl

4 months ago

Code

Issues

10

Pull Requests

6

Wiki

Pulse

Graphs

Network

Settings

HTTPS clone URL

https://github.co



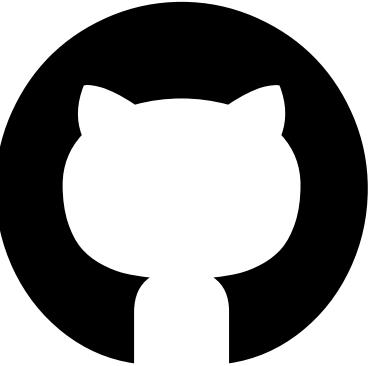
You can clone with HTTPS, SSH, Subversion, and other methods.

Clone in Desktop

Download ZIP

fork URLs

• • • • •

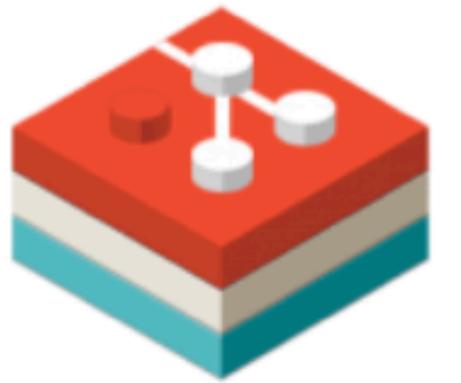
`https:// / user / repo / fork`

[This repository](#)[Explore](#) [Gist](#) [Blog](#) [Help](#)[holman](#)[+ -](#)

PUBLIC

[holman / boom](#)[Unwatch](#) [18](#)[Unstar](#) [656](#)[Fork](#) [84](#)

Where should we fork this repository?

[@holman](#)[@github](#)[@play](#)[@libgit2](#)

fork URLs



README links

fork URLs



☞ what's inside

A lot of stuff. Seriously, a lot of stuff. Check them out in the file browser above and see what components may mesh up with you. [Fork it](#), remove what you don't use, and build on what you do use.

Remember:

Git is probably terrible

But it's also neato

Thanks!