Get a Jumpstart on Collaboration and Code Review in GitHub

By Katherine "Kati" Michel







Welcome!

Goal

I want to teach you a process that will get you started collaborating and doing code review as quickly as possible

Announcing TacoFancy!



dan sinker @dansinker · 3 Nov 2013

Announcing tacofancy, a github repo for community-driven taco amazingness:



sinker/tacofancy

community-driven taco repo. stars stars stars.

Contribute to tacofancy development by creating an account on GitHub.

github.com









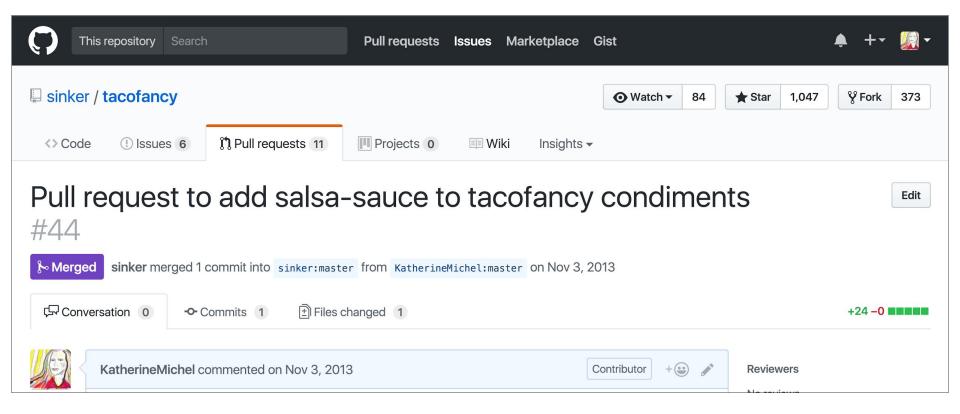


The One Sentence That Motivated Me to Start Using GitHub

Are You New to Github But Want to Contribute?

No better time than the present to learn Git! Thankfully, this repo is pretty simple. Github makes some amazing guides that are a great starting point. Specifically, I'd recommend you start with the Understanding the Github Workflow guide, which is an awesome top-level explanation of how all this works. From there, pretty much everything you'd want to know to contribute to Tacofancy is contained in Github's very handy Forking Projects guide section. Beyond that, their help section is crazy helpful.

My First Pull Request

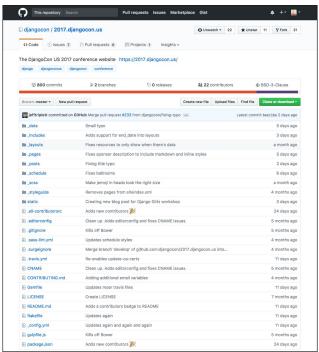


DjangoCon US Website as an Example Project

DjangoCon US Website Homepage



DjangoCon US Website Repo

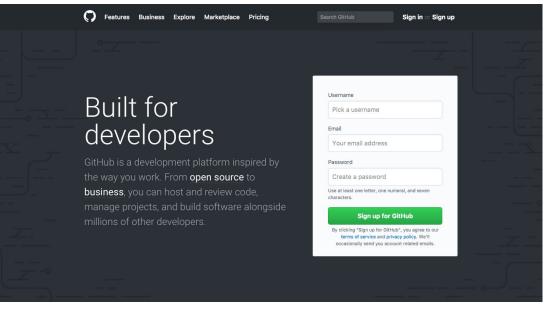


What are Git and GitHub?

GitHub is a website built on the version control software Git.

GitHub Website

Git Command Line

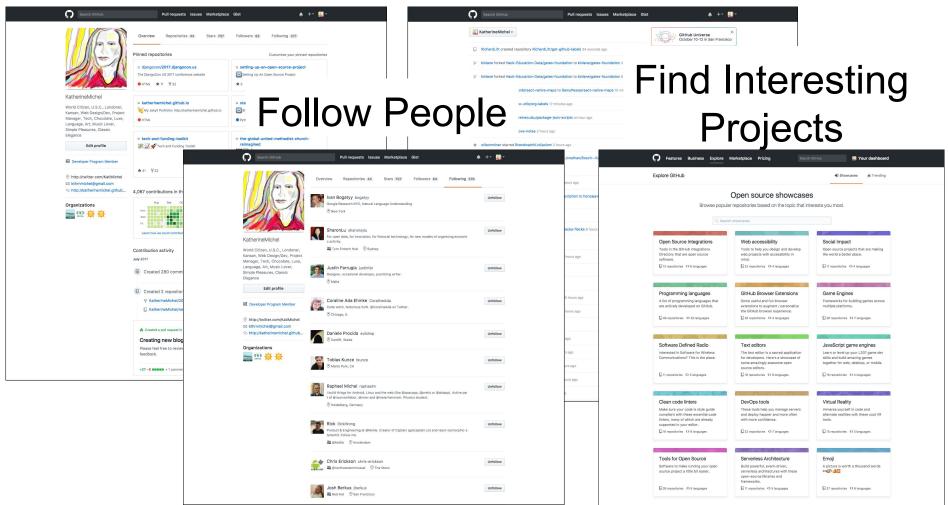




GitHub: Social Network

Make a User Profile

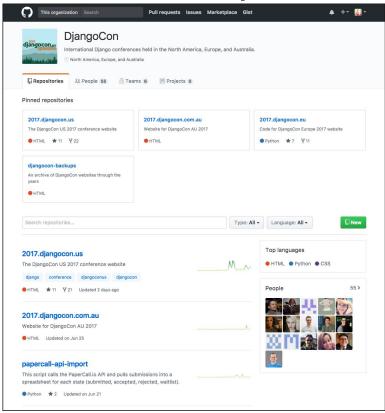
Follow Activity in Newsfeed



GitHub: Repositories

GitHub users work on code together

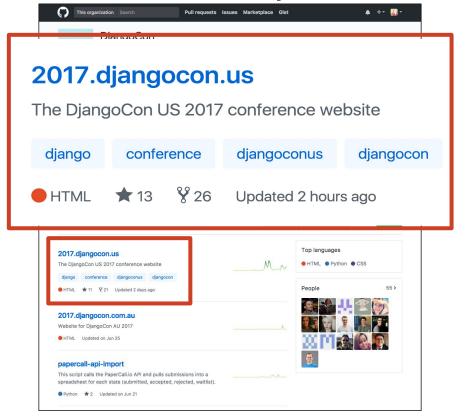
DjangoCon US Organization Account Repo List



GitHub: Repositories

GitHub users work on code together

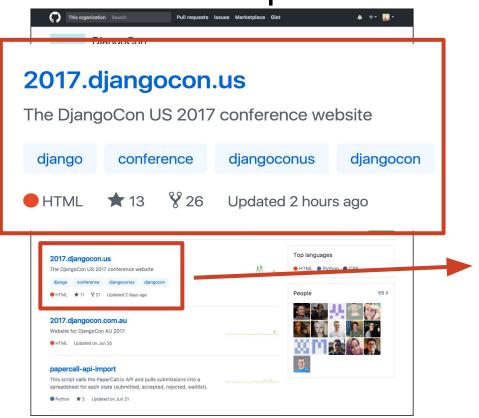
DjangoCon US Organization Account Repo List



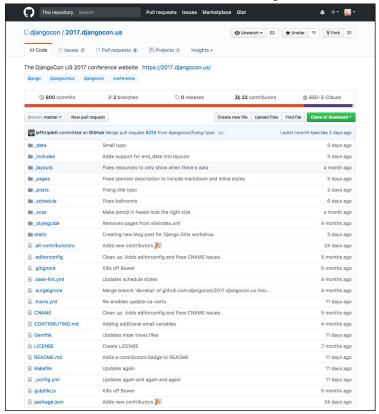
GitHub: Repositories

GitHub users work on code together

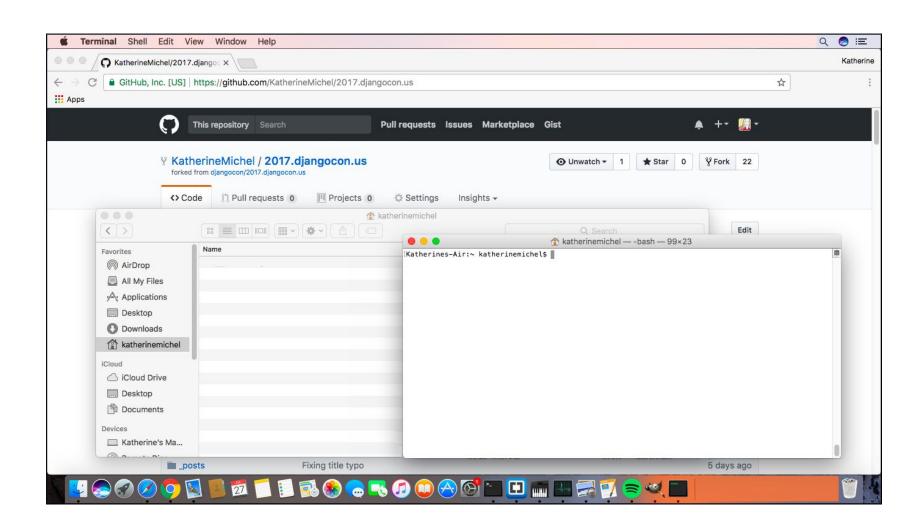
DjangoCon US Organization Account Repo List



DjangoCon US Website Repo

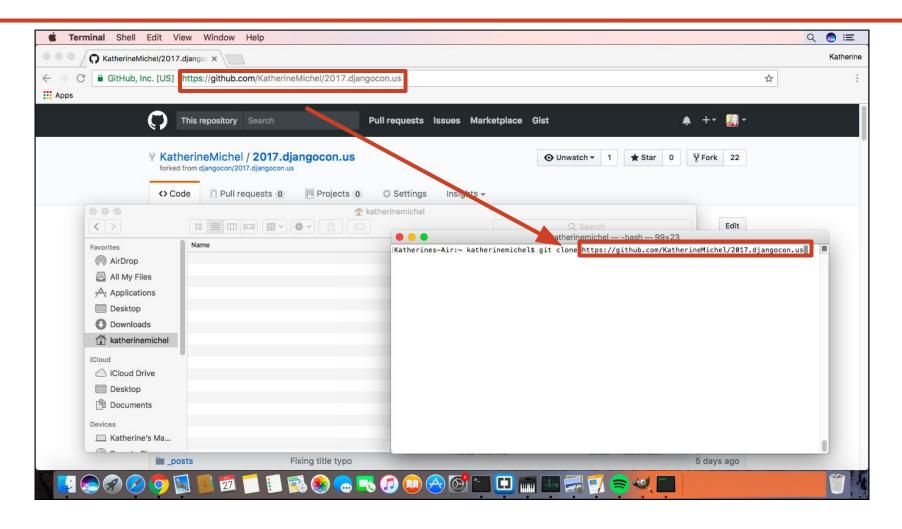


Local Dev Environment



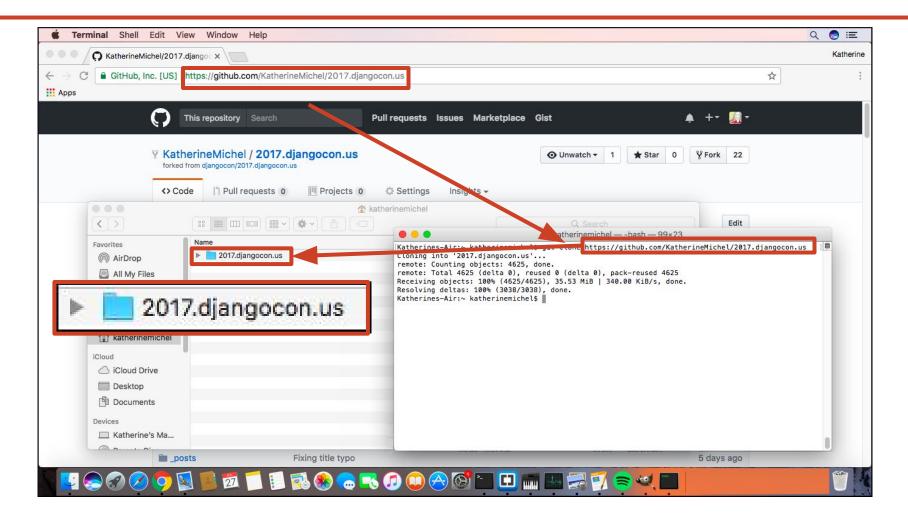
Local Dev Environment

\$ git clone https://github.com/KatherineMichel/2017.djangocon.us



Local Dev Environment

\$ git clone https://github.com/KatherineMichel/2017.djangocon.us



Collaboration and Code Review Best Practice Workflow

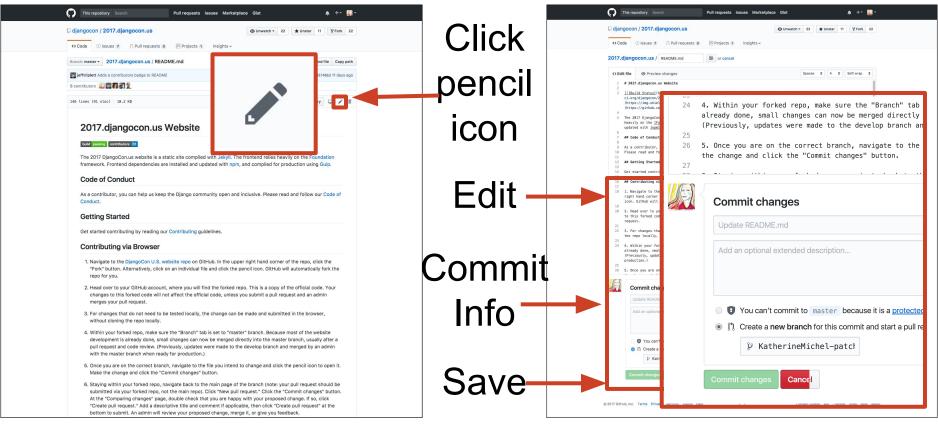
You need to switch between multiple tasks:

- Keep codebase up-to-date
- Create one or more features
 - Do code review

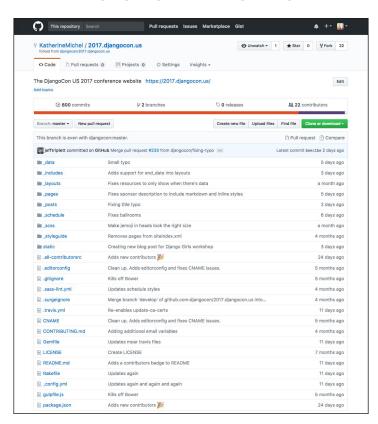
Working on a File in GitHub

File on GitHub (README)

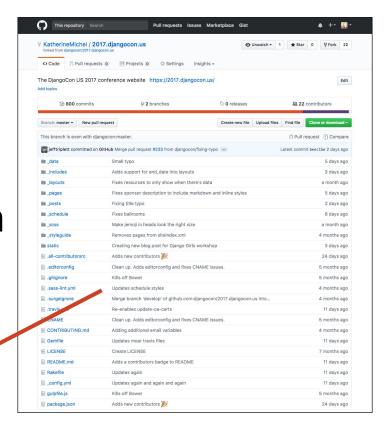
Editing File



Master Branch



Master Branch

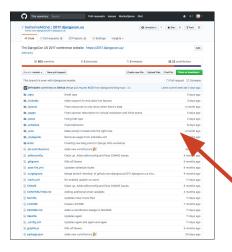


Feature Branch

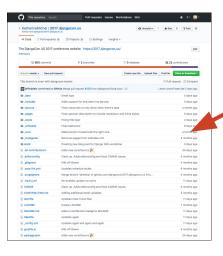
Y KatherineMichel / 2017.djangocon.us

O Code | 1 Pull requests 0 | 1 Projects 0 O Settings Insights -

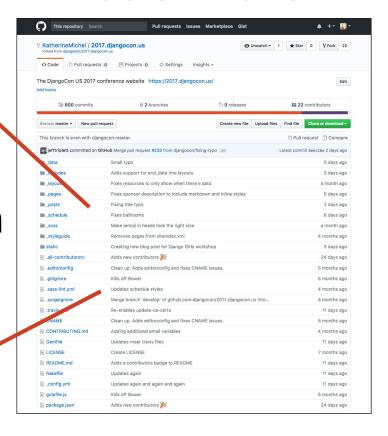
Feature Branch



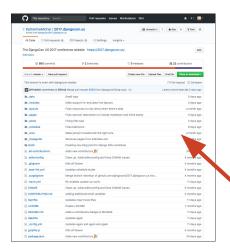
Feature Branch



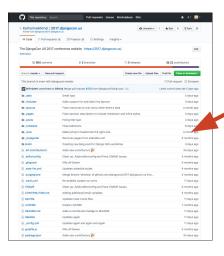
Master Branch



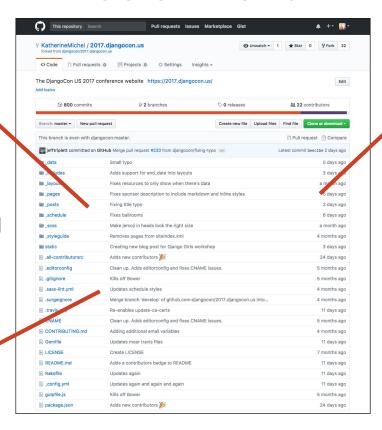
Feature Branch



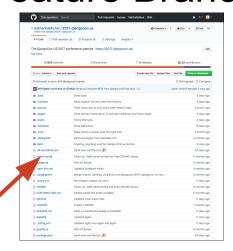
Feature Branch



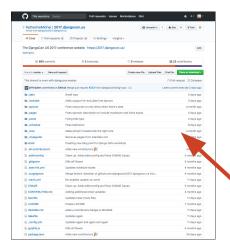
Master Branch



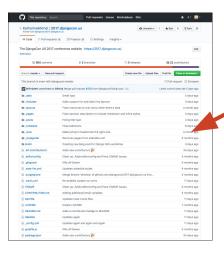
Feature Branch



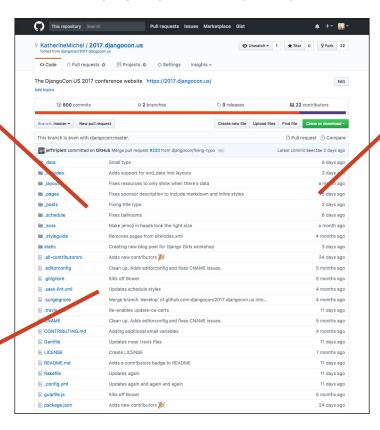
Feature Branch



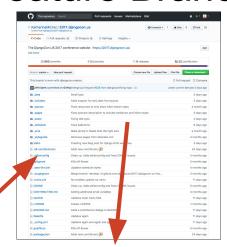
Feature Branch



Master Branch



Feature Branch



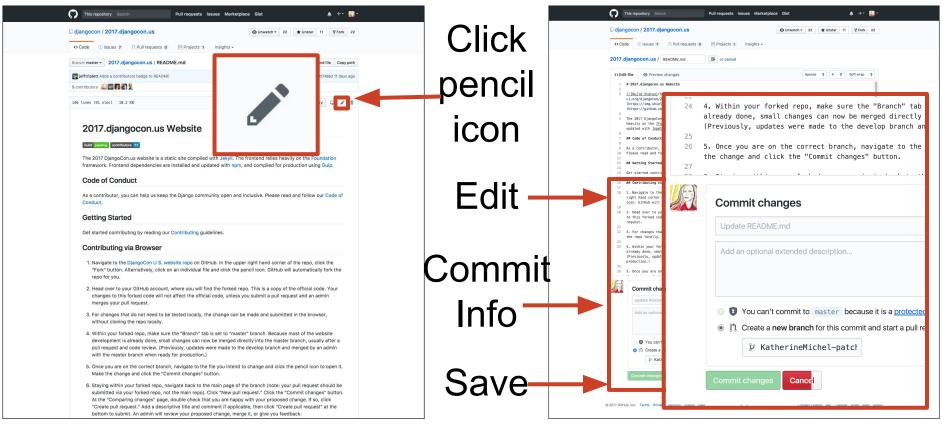
Pull Request Branch



How to Create a Branch

File on GitHub (README)

Editing File



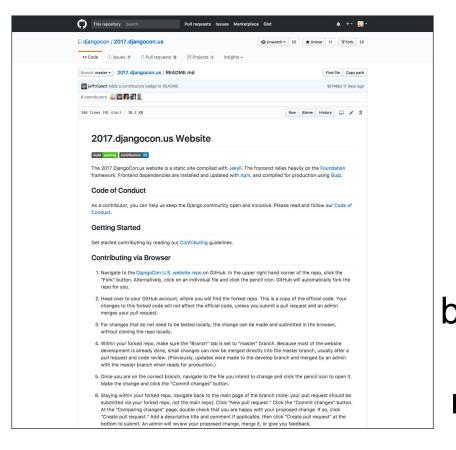
How to Create a Branch

File on GitHub (README)

Editing File

Pull requests Issues Marketplace Gist

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Spaces \$ 4 \$ Soft wrap \$ 1 # 2817.dianoprop.us Website Il@uild Status[nttps://travis-ci.org/djangocon/2017.djangocon.us.swg?branchmaster)[inttps://travis-ci.org/djangocon/2017.djangocon.us) !IfContibitors! Inttps://djan.ubid.s.iog/tithub/oor/djangocon/2017.djangocon.us.swg]] [https://github.com/djangocon/2017.djangocon.us/graphs/contributors] As a contributor, you can help us keep the Django community open and inclusive.

Please read and follow our <u>ICode of Conductl</u>(https://www.djangoproject.com/conduct/). ## Getting Started Get started contributing by reading our [Contributing](CONTRIBUTING.md) guidelines. 3. For changes that do not need to be tested locally, the change can be made and submitted in the browser, without cloning New already done, small changes can now be merged directly into the master branch, usually after a pull request and code review [Previously, updates were made to the develop branch and merged by an admin with the master branch when ready for branch Commit directly to the master branch. Create a new branch for this commit and start a pull reque KatherineMichel-patch and Cancel name

□ djangocon / 2017.djangocon.us

2017.djangocon.us / README.md

⇔ Code ① Issues 7 ☐ Pull requests 0 ☐ Projects 1 Insights •

Overview

- Determine which collaboration approach to use
 - Clone a repo into our local development environment, create a feature branch, make a change, push the branch to the GitHub repo, and submit a pull request
 - Review the two different types of pull request branches as a maintainer
 - Recommendations

Section 1

Determine which collaboration approach to use

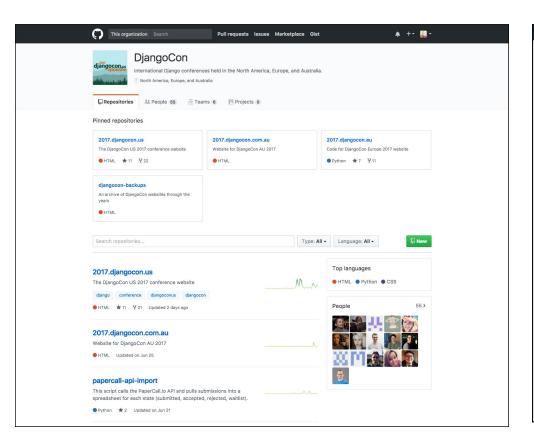
The Two Collaborative Development Models

- "Shared Repository" Model
 - "Fork and Pull" Model

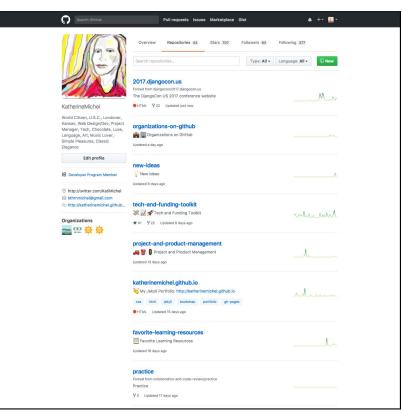
The two different models typically correspond to the two different account types and which model you use depends on whether you have write permission to the

Two Types of Accounts

Organization Account



User Account



Write Permission

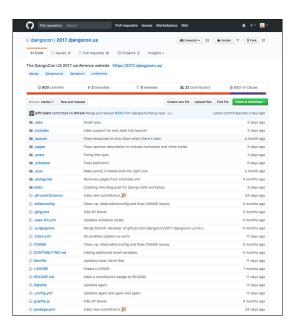
When a user has write permission to a repo, it means they can make changes directly inside of the repo

Write Permission and Collaboration Examples

Shared Repository

DjangoCon US Website Repo

Write Permission: Maintainers



Write Permission and Collaboration Examples

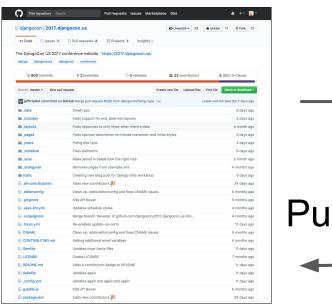
Shared Repository

Fork and Pull

DjangoCon US Website Repo

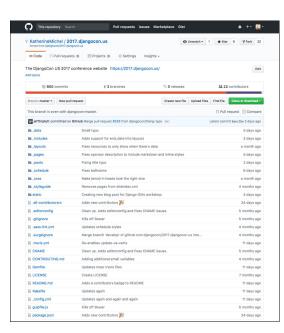
Fork

Write Permission: Maintainers Write Permission: User



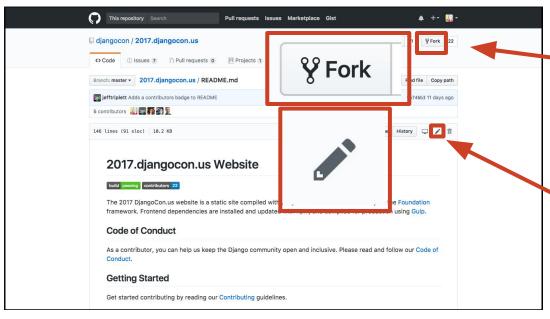
Fork

Submit Pull Request



How to Fork a Repo

DjangoCon US Website Repo



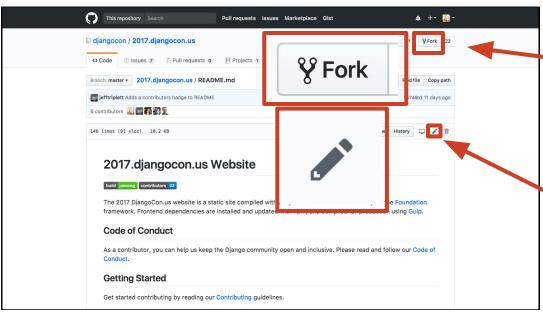
Click the "Fork"

button

Click pencil icon to try to edit a file you don't have write permission to

How to Fork a Repo

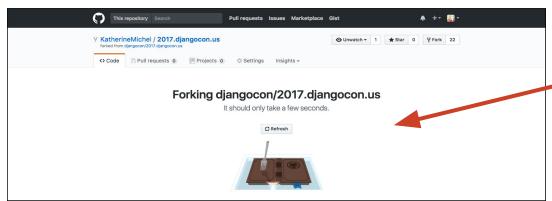
DjangoCon US Website Repo



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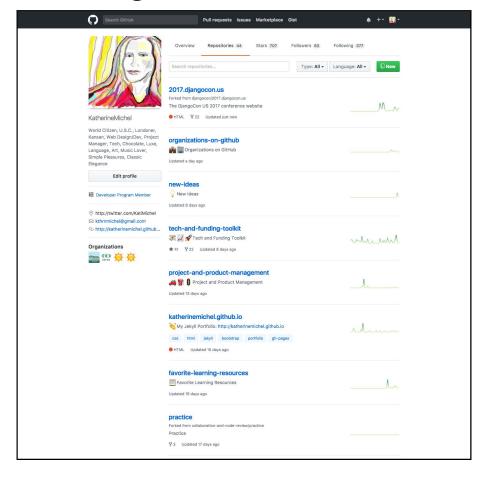


GitHub will notify you that the repo is being forked

Forked Repo

User Account

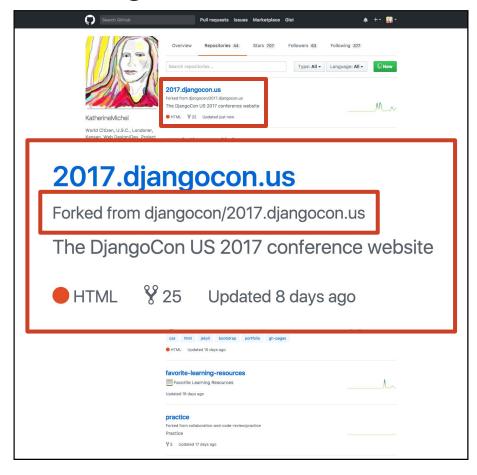
www.github.com/KatherineMichel



Forked Repo

User Account

www.github.com/KatherineMichel

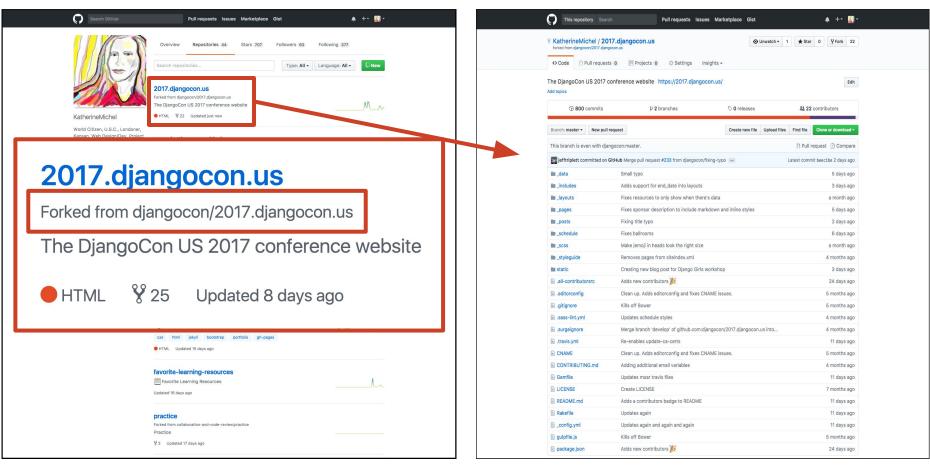


Forked Repo

User Account

Forked Repo

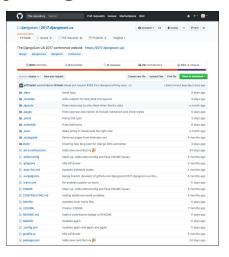
www.github.com/KatherineMichel/2017.djangocon.us



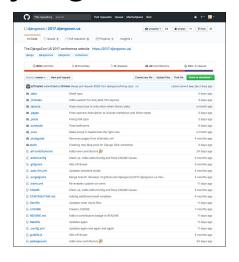
Section 2

- Determine which collaboration approach to use
 - Clone a repo into our local development environment, create a feature branch, make a change, push the branch to the GitHub repo, and submit a pull request

DjangoCon US Website Repo

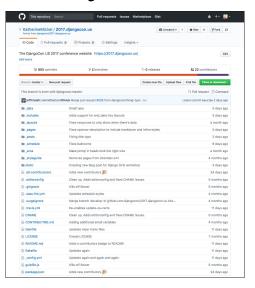


DjangoCon US Website Repo

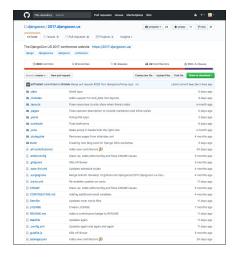




My Fork

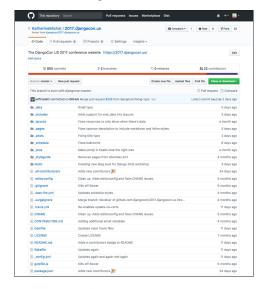


DjangoCon US Website Repo

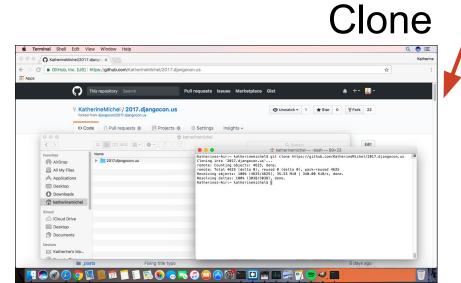


Remote origin

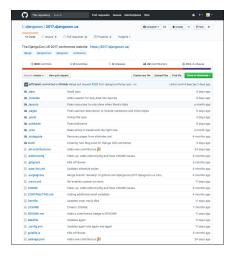
My Fork



Local
Development
Environment

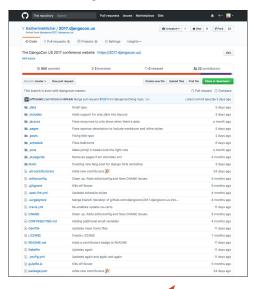


DjangoCon US Website Repo

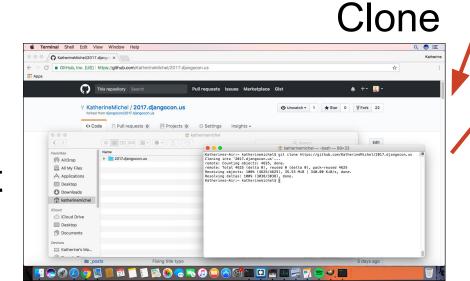


Remote origin

My Fork

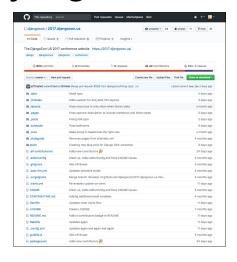


Local
Development
Environment



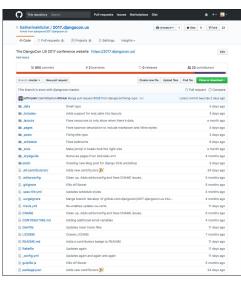
Push changes, including branches

DjangoCon US Website Repo

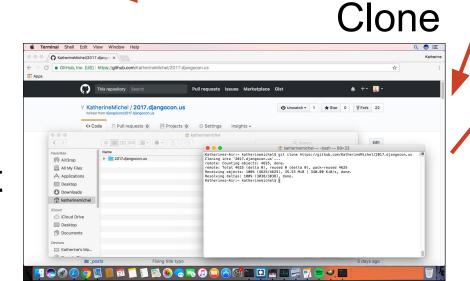


Remote origin

Submit Pull Request My Fork



Local
Development
Environment



Push changes, including branches

Shared Repository

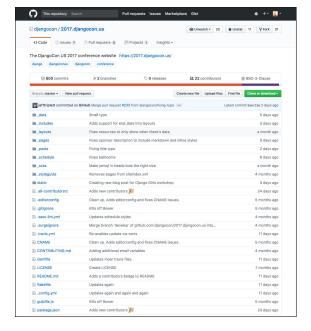
DjangoCon US Website Repo



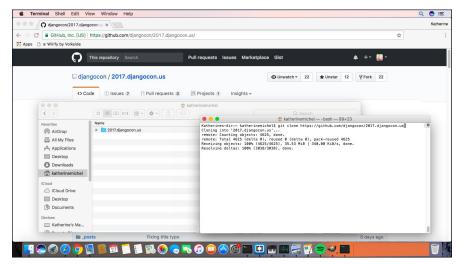
Shared Repository

DjangoCon US Website Repo

Clone



Remote origin



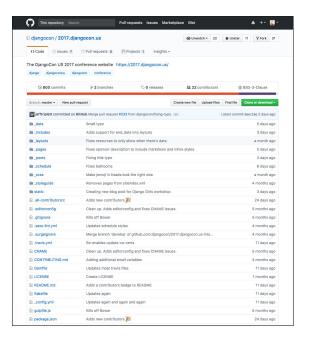
Local
Development
Environment

Shared Repository

DjangoCon US Website Repo

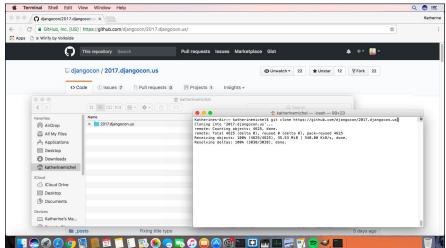
Clone

Can push
or pull
because of
write
permission,
No fork
needed



Remote origin

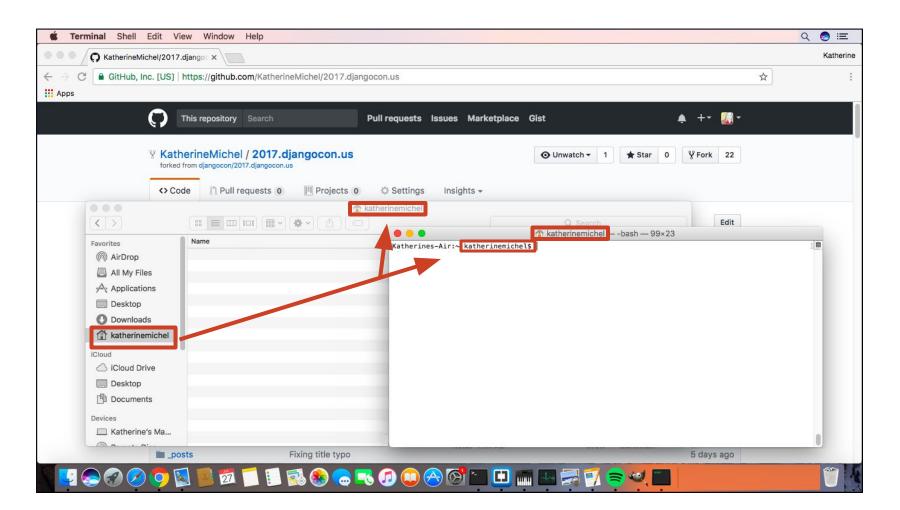
Push branches, submit pull requests



Local
Development
Environment

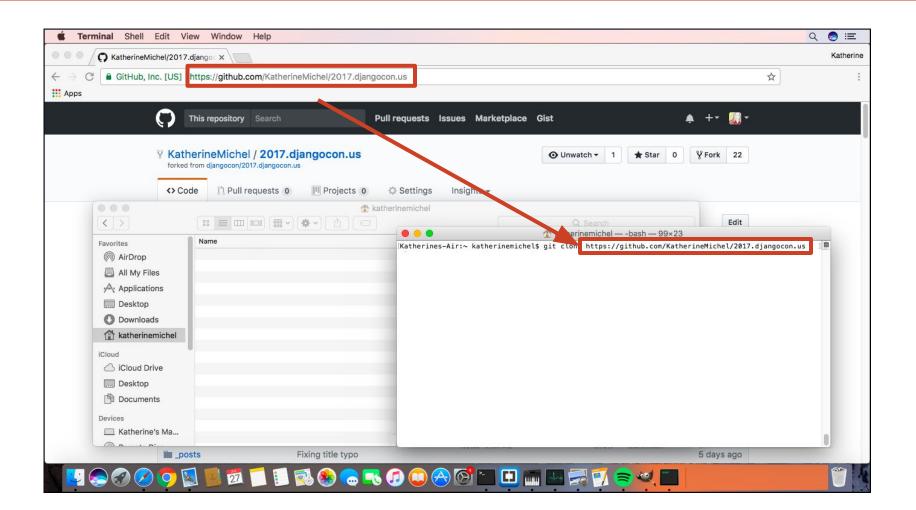
Local Dev Environment

Working within home directory: katherinemichel



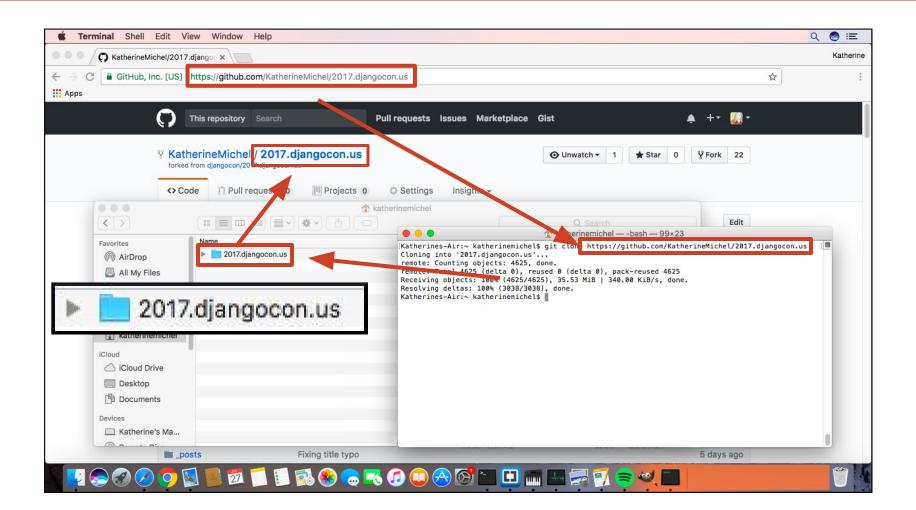
Cloning

\$ git clone https://github.com/KatherineMichel/2017.djangocon.us



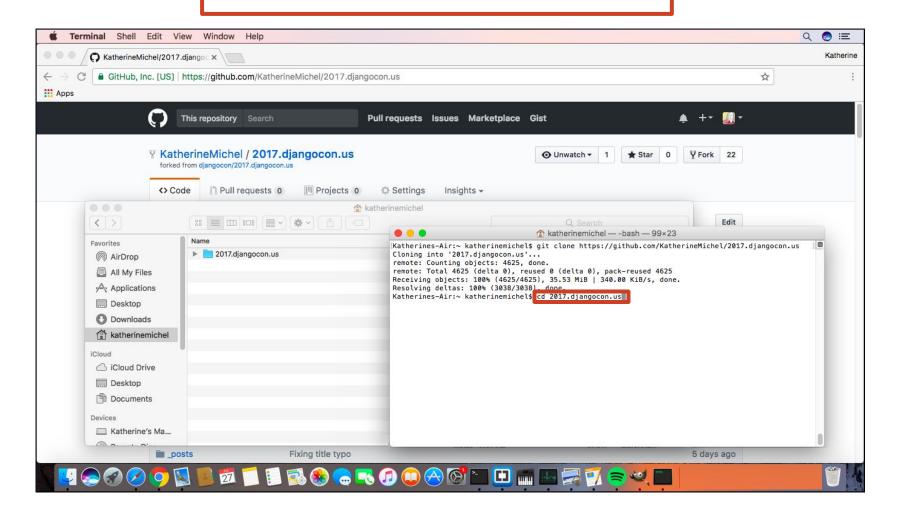
Cloning

\$ git clone https://github.com/KatherineMichel/2017.djangocon.us



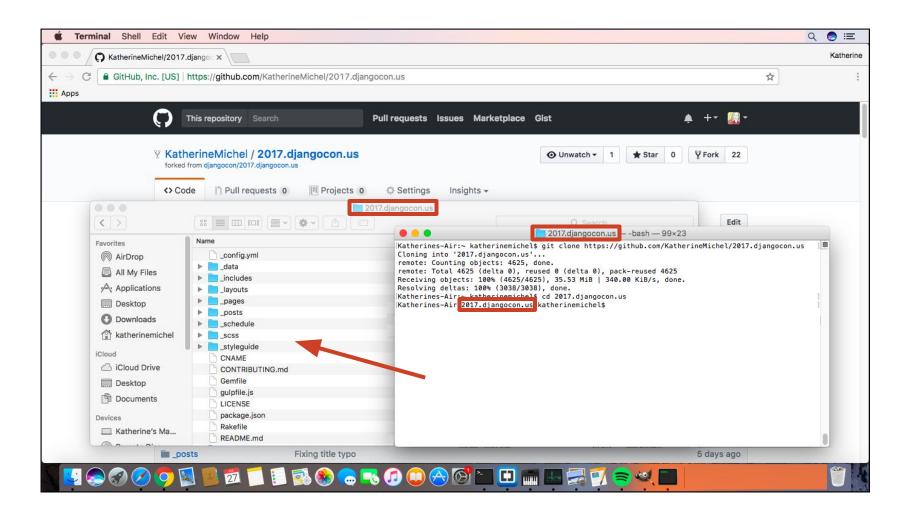
Changing Directory

\$ cd 2017.djangocon.us



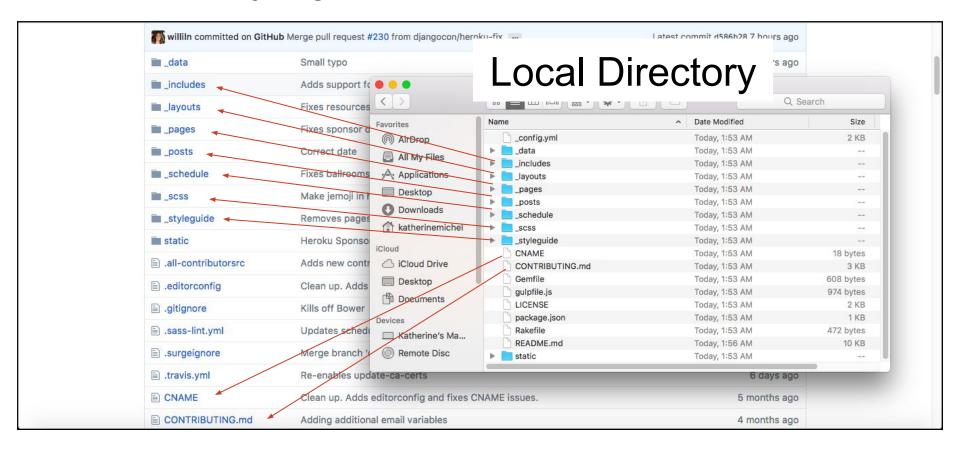
Changing Directory

Working within new directory: 2017.djangocon.us



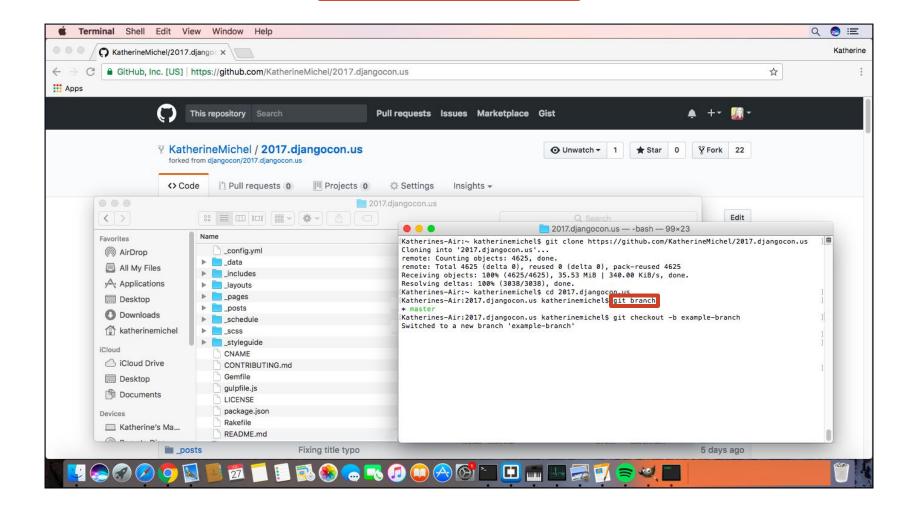
GitHub Repo Versus Local Directory

DjangoCon US GitHub Repo



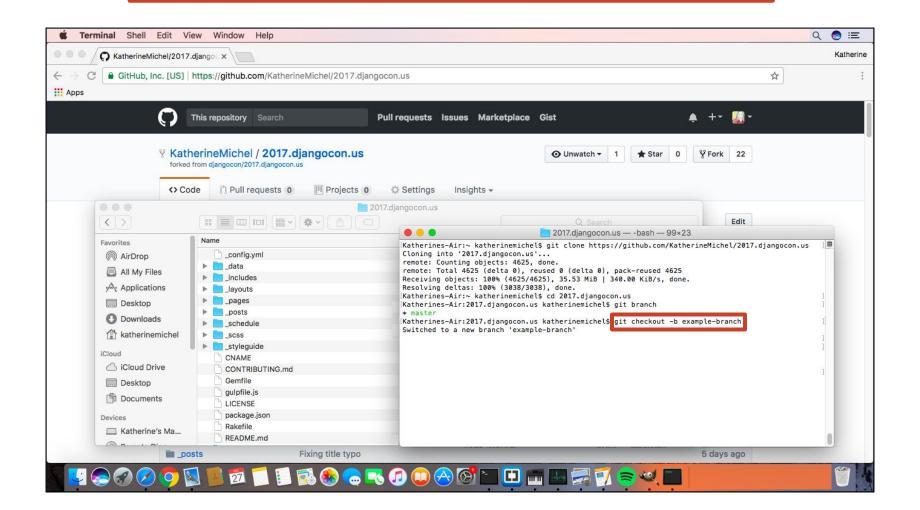
Verifying Branch

\$ git branch

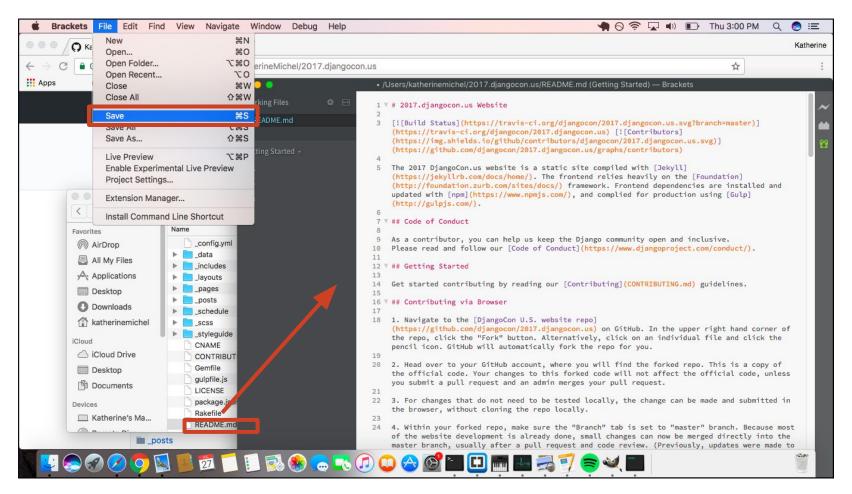


Creating a New Branch

\$ git checkout -b example-branch

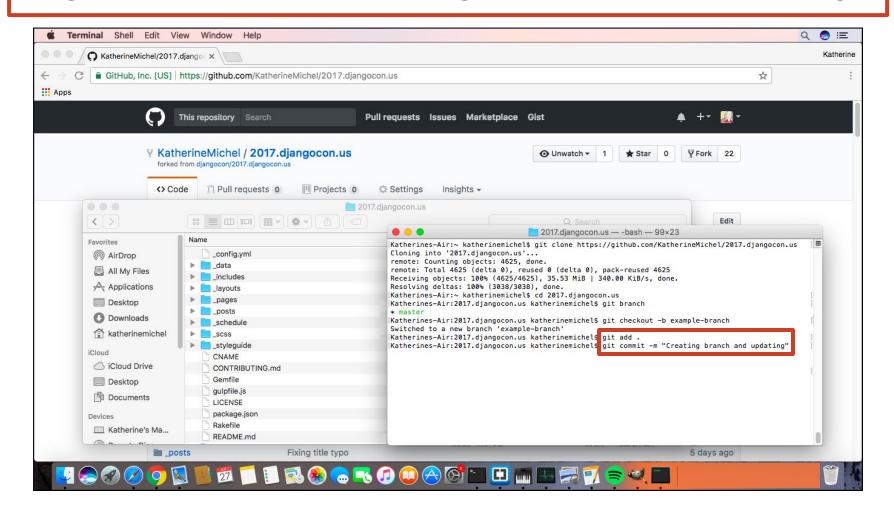


Working on a File Locally



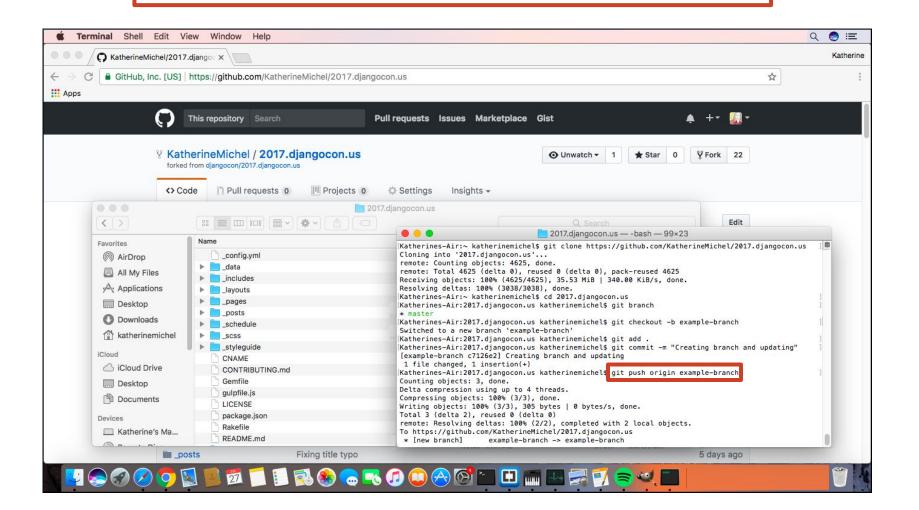
Adding and Committing

- \$ git add.
- \$ git commit -m "Creating branch and updating"



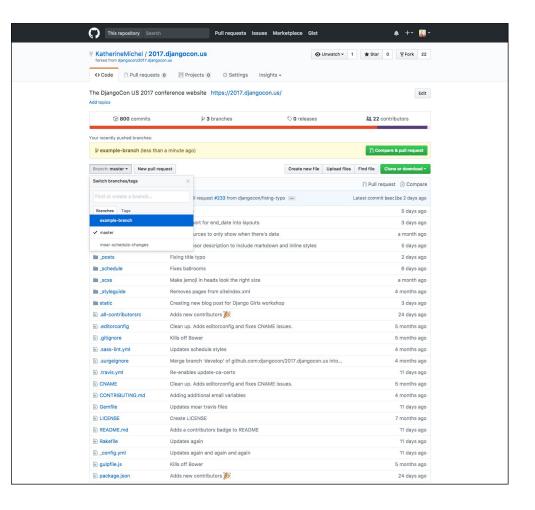
Pushing

\$ git push origin example-branch



New Branch

Branch Tab

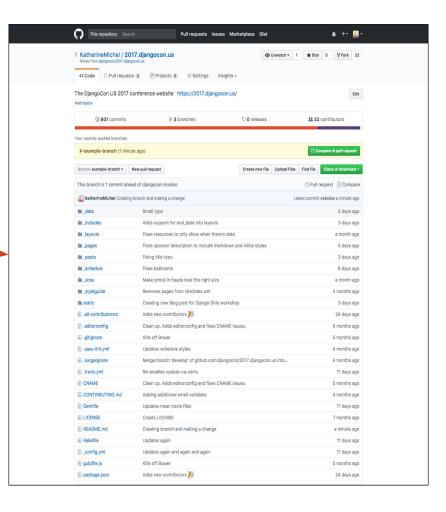


New Branch

Branch Tab

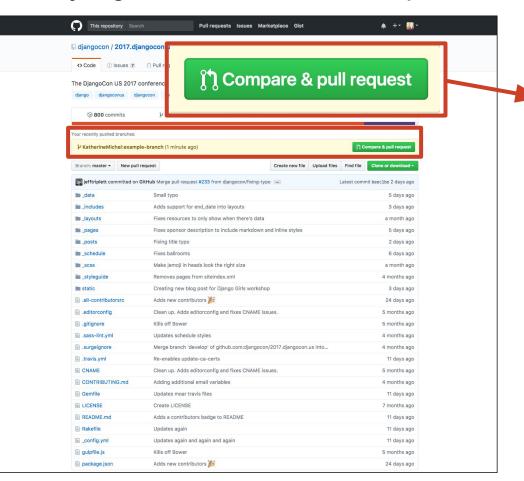
This repository Search A +- M-Pull requests Issues Marketplace Gist Y KatherineMichel / 2017.djangocon.us O Unwatch ▼ 1 ★ Star 0 Ÿ Fork 22 ♦ Code Pull requests 0 Projects 0 Settings Insights ▼ The DjangoCon US 2017 conference website https://2017.djangocon.us/ Edit ® 800 commits ₽ 3 branches O releases 22 contributors Your recently pushed branches P example-branch (less than a minute ago) Branch: master ▼ New pull request Create new file Upload files Find file Clone or download Switch branches/tags 🖰 Pull request 🕒 Compare Il request #233 from djangocon/fixing-typo ... Latest commit beec1be 2 days ago 5 days ago 3 days ago to only show when there's data a month ago 2 days ago **Branches Tags** 6 days ago a month ago example-branch 3 days ago 24 days ago editorconfig Clean up. Adds editorconfig and fixes CNAME issues. 5 months ago agitignore Kills off Bower 5 months ago a.sass-lint.yml a .surgeignore Merge branch 'develop' of github.com:djangocon/2017.djangocon.us into.. 4 months ago a.travis.vml Re-enables undate-ca-certs 11 days ago E CNAME Clean up. Adds editorconfig and fixes CNAME issues. 5 months ago CONTRIBUTING.md Adding additional email variables 4 months ago 11 days ago I LICENSE Create LICENSE 7 months ago README.md Adds a contributors badge to README 11 days ago Rakefile Updates again 11 days ago a _config.yml Updates again and again and again 11 days ago gulpfile.js Kills off Bower 5 months ago package.json Adds new contributors 🎉 24 days ago

New Branch

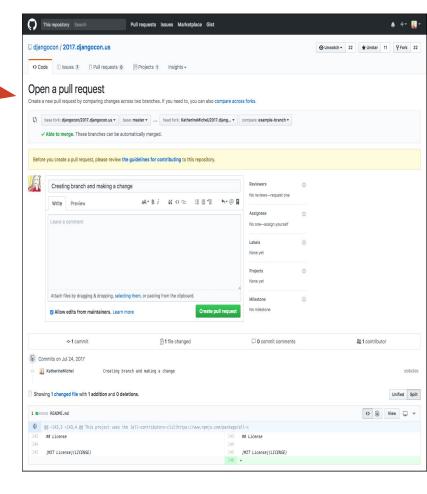


Submit a Pull Request

DjangoCon US Website Repo

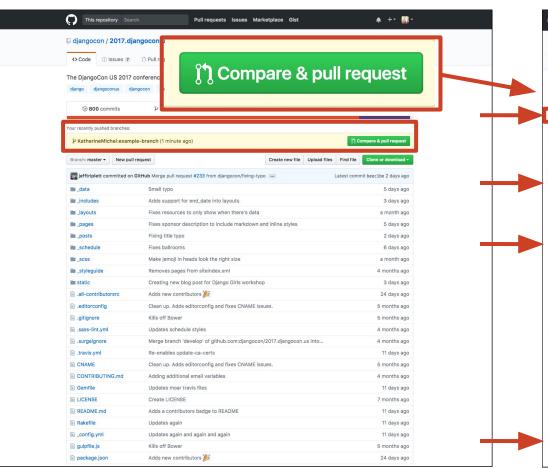


Creating a New Pull Request



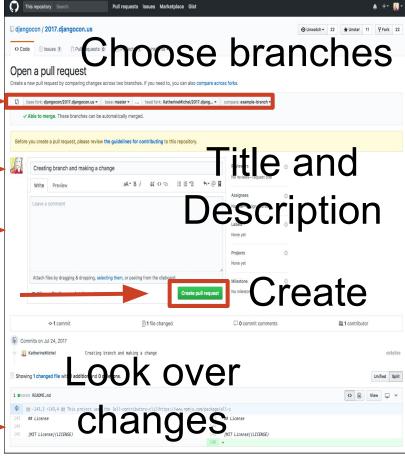
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DjangoCon US Website Repo



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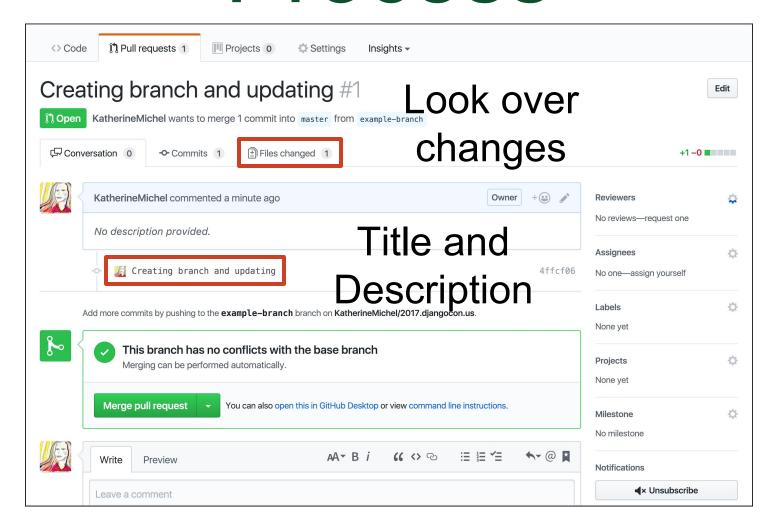
Pull requests Issues Marketolace Gist



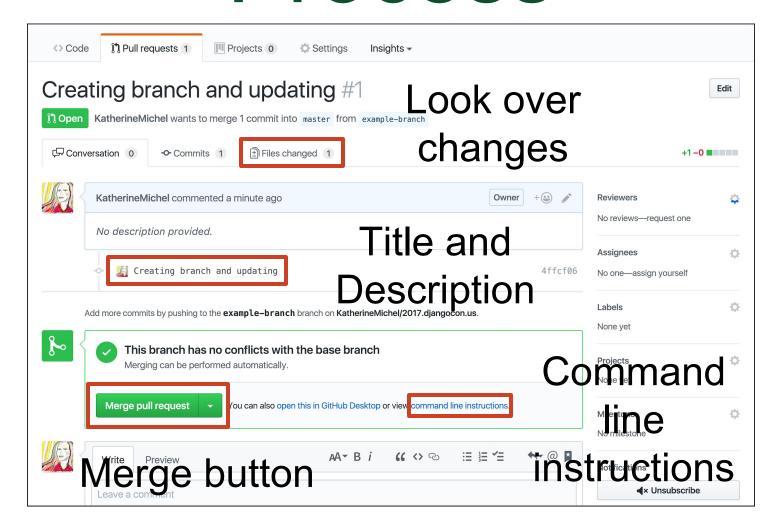
Section 3

- Determine which collaboration approach to use
 - Clone a repo into our local development environment, create a feature branch, make a change, push the branch to the GitHub repo, and submit a pull request
 - Review the two different types of pull request branches as a maintainer

Pull Request Review Process



Pull Request Review Process



Pull Request Command Line

command line instructions. Merge pull request Merge pull request You can also open this in GitHub Desktop or view command line instructions Merging via command line If you do not want to use the merge button or an automatic merge carnot be performed, you can perform a manual merge on the command line. https://github.com/KatherineMichel/2017.djangocon.us.git HTTPS Step 1: From your project repository, bring in the changes and test. git fetch origin Ê git checkout -b example-branch origin/example-branch git merge master Step 2: Merge the changes and update on GitHub. git checkout master git merge --no-ff example-branch git push origin master

Pull Request Review Options

Do no run code locally

Run code locally

Click merge

Make change in browser then click merge

Pull Request Review Options

Do no run code locally

Run code locally

Click merge

Make change in browser then click merge

No change needed, go back to browser and click merge

Ask pull request author to make change

You update and merge locally, push to GitHub

You push change to pull request, then click merge

Pull Request Branches

DjangoCon US Website Repo

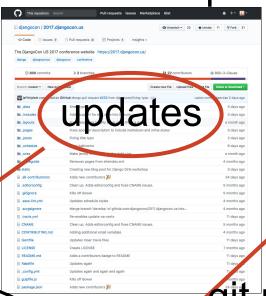
remote origin

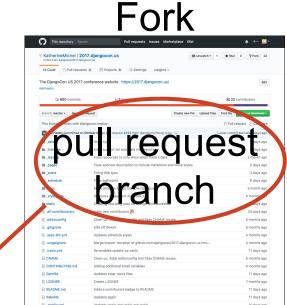
git fetch origin

pull request branch

<remote>/<branch>

.git folder





git pull <url> <branch>

Write permission granted to pull request as maintainers

Pull Request Review

Shared Repo Branch

```
$ git fetch origin
$ git checkout -b <branch-name> origin/<branch-name>
$ git merge master
$ git push origin <branch-name>
```

Forked Repo Branch

```
$ git checkout -b <branch-name> master
$ git pull https://github.com/<user-name>/<repo-name> <branch-name>
$ git push https://github.com/<user-name>/<repo-name> <branch-name>
```

Merge Pull Request Locally and Push to Master Branch

```
$ git checkout master
$ git merge --no-ff <branch-name>
$ git push origin master
```

Section 4

- Determine which collaboration approach to use
 - Clone a repo into our local development environment, create a feature branch, make a change, push the branch to the GitHub repo, and submit a pull request
 - Review the two different types of pull request branches as a maintainer
 - Recommendations

Documentation

README.md

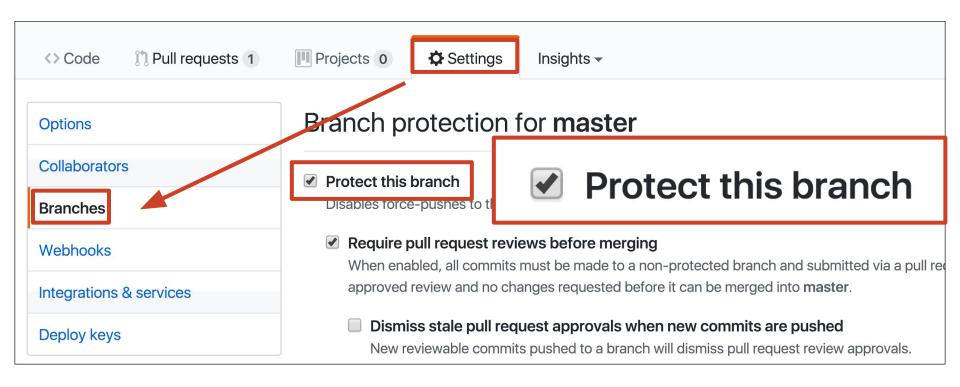




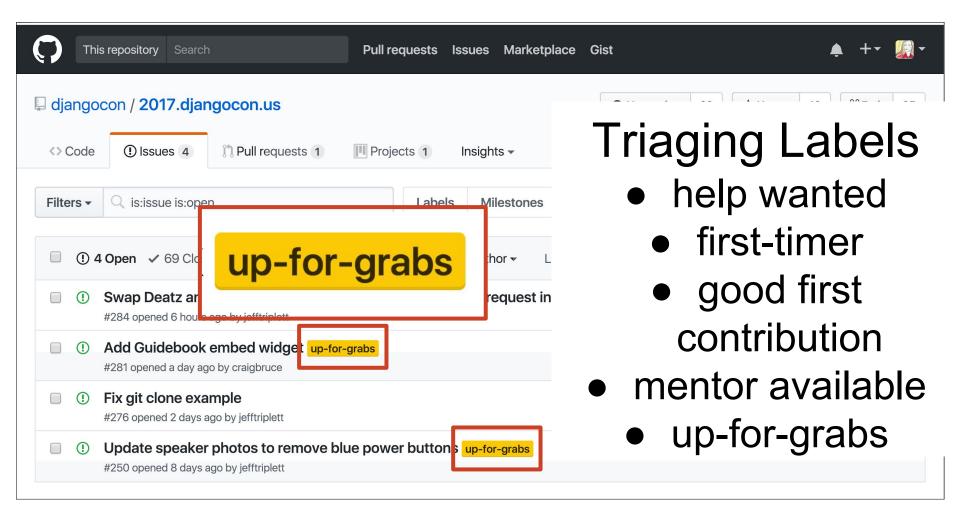


CODE OF CONDUCT.md CONTRIBUTING.md django The web framework for perfectionists with deadline Code of Cond OVERVIEW DOWNLOAD DOCUMENTATION NEWS COMMUNITY CODE ABOUT # DONATE Redistribution and us diangocon / 2017.diangocon.us O Unwatch + 22 ★ Unstar 12 Y Fork 22 1. Redistribution **Getting Starte** O Code | Issues (i) | I'l Pull requests (i) | III Projects (i) Insights v Diango Code of Conduct Diango Community Code of Conduct 2. Redistribution Get started contr Branch: master + 2017.djangocon.us / CONTRIBUTING.md Find file Copy path Like the technical community as a whole, the Django team and community is made up of a mixture of Code of Conduct Contributing KatherineMichel Adding additional email va 3. Neither the name professionals and volunteers from all over the world, working on every aspect of the mission -1. Navigate to t including mentorship, teaching, and connecting people 43 lines (20 sloc) 3.03 KB Raw Blame History 🖵 🎤 🖺 Diversity is one of our huge strengths, but it can also lead to communication issues and unhappiness. repo for you THIS SOFTWARE IS PROVID ANY EXPRESS OR IMPLIED WARRANTIES OF MERCHANTA To that end, we have a few ground rules that we ask people to adhere to. This code applies equally to 2. Head over to founders, mentors and those seeking help and guidance. changes to thi DISCLAIMED. IN NO EVENT Contributing to DiangoCon US 2017 ANY DIRECT, INDIRECT. merges your p This isn't an exhaustive list of things that you can't do. Rather, take it in the spirit in which it's → 1/2 Thank you so much for taking the time to contribute! 1/2 → 3. For changes intended - a guide to make it easier to enrich all of us and the technical communities in which we LOSS OF USE, DATA, OR ANY THEORY OF LIABILITY The following is a set of guidelines for contributing to DiangoCon US 2013 without cloni (INCLUDING NEGLIGENCE SOFTWARE, EVEN IF ADV 4. Within your f This code of conduct applies to all spaces managed by the Django project or Django Software @Looking development Foundation. This includes IRC, the mailing lists, the issue tracker, DSF events, and any other forums pull request a Start looking through the Issues and watch out for any issues with the vellow label up-for-grabs. Issues marked with created by the project team which the community uses for communication. In addition, violations of this label haven't been assigned to anyone yet and we would love for you to work on them All content on this page is licensed under a Creative Commons this code outside these spaces may affect a person's ability to participate within them. 5. Once you are @ 2017 Others Inc. Terms Privacy If you believe someone is violating the code of conduct, we ask that you report it by emailing conduct@diangoproject.com. For more details please see our Reporting Guidelines Here's a quick guide to help you understand what the different difficulty labels mean that you will find while looking 6. Staving within submitted via · Be friendly and patient. difficulty: easy: Fixing this issue doesn't require a lot of time or programming knowledge. This would be a great At the "Comp "Create pull re Be welcoming. We strive to be a community that welcomes and supports people of all issue for someone new to programming or open source to work on, difficulty; medium: This is an issue which requires more time or programming knowledge than a <u>difficulty</u>; easy issue but you don't have to be a programming expert to fix it. <u>difficulty</u>; hard: This issue probably requires some time or a good bit of bottom to subr backgrounds and identities. This includes, but is not limited to members of any race, ethnicity, culture, national origin, colour, immigration status, social and economic class, educational level, programming knowledge and could be a challenge, but this shouldn't keep you from trying to submit a patch for it for sex, sexual orientation, gender identity and expression, age, size, family status, political belief, religion, and mental and physical ability. . Be considerate. Your work will be used by other people, and you in turn will depend on the work If you find any bugs, it would be great if you would let us know so we can look into it. You can do so by creating an of others. Any decision you take will affect users and colleagues, and you should take those issue. If you don't know how to create an issue, please follow these instructions. Screenshots and notes for how you encountered the bug are really helpful when reporting bugs! consequences into account when making decisions. Remember that we're a world-wide community, so you might not be communicating in someone else's primary language. Creating Pull Requests · Be respectful. Not all of us will agree all the time, but disagreement is no excuse for poor behavior After you've created a patch that fixes an issue, please submit a pull request for it. If you're not sure how to create a and poor manners. We might all experience some frustration now and then, but we cannot allow pull request, please follow these instructions. In general we'd like to ask you to please target the development that frustration to turn into a personal attack. It's important to remember that a community where branch with your pull requests people feel uncomfortable or threatened is not a productive one. Members of the Diango Reviewing Issues and Pull Requests community should be respectful when dealing with other members as well as with people outside You're welcome to review issues and pull requests, provide feedback, and answer questions. Please remember to be friendly and respectful when commenting on issues or pull requests, and always follow our Code of Conduct. It's okay for people to make mistakes and ask questions! . Be careful in the words that you choose. We are a community of professionals, and we conduct ourselves professionally. Be kind to others. Do not insult or put down other participants. Harassment and other exclusionary behavior aren't acceptable. This includes, but is not limited to: How Can I Get Help? Violent threats or language directed against another person. If you have a question or need help, please leave a comment on the issue you have a question about or are working

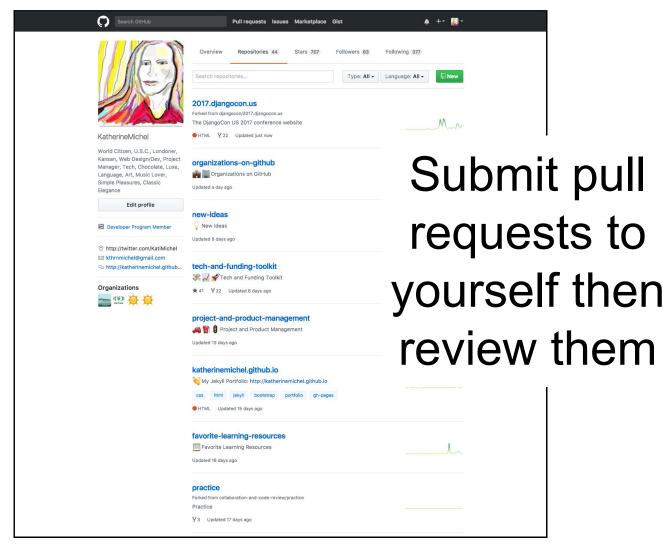
Code Safety



Tips for Getting Started



Sandboxing



Go For It!

Contribute to the DjangoCon US website next year! We have a diverse group of contributors of all skill levels and we are always looking for more contributors. Let us know if you are interested.

Thank You!

Useful Resources: https://git.io/v5fRh

Katherine "Kati" Michel

Twitter handle: @KatiMichel

GitHub username: KatherineMichel