
Getting Started with Open Source

What is Open Source?

- Open source simply means that anyone can access, modify and improve.
- Developed in a decentralized and collaborative way, relying on peer review and community production
- More flexible
- Lot of softwares and libraries are open source.

Why Open Source?

- Improves code style
- Helps understand best coding principles
- Showcases your skills
- Learn workflow of softwares and libraries
- Working in collaborative environment
- Your github profile speaks a lot about your skills and helps to make your profile stand out irrespective of if you are applying for jobs/internships, research, higher studies etc.



GitHub

Github Profile

- Setting up github profile
- Writing Bio and Main README
- Pinning repositories
- Public and private repositories
- Contributions
- Contributions Activity

Github Student Developer Pack

[Students](#)[Teachers](#)[Schools](#)[Events](#)[Get benefits](#)[Home](#) / [Students](#) / GitHub Student Developer Pack

GitHub Student Developer Pack

[Get your pack](#)

Learn to ship software like a pro. There's no substitute for hands-on experience. But for most students, real world tools can be cost-prohibitive. That's why we created the GitHub Student Developer Pack with some of our partners and friends: to give students free access to the best developer tools in one place so they can learn by doing.

Love the pack? Spread the word

[Tweet](#)[Like 63K](#)

Browse by category:

[All](#)[Cloud](#)[Design](#)[Developer tools](#)[Domains](#)[Game development](#)[Infrastructure & APIs](#)[Internet of Things](#)[Learn](#)[Marketing](#)[Mobile](#)[Productivity](#)[Security & analytics](#)

<https://education.github.com/pack>

Getting started with Github

Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository](#).

Owner *



Repository name *

Great repository names are short and memorable. Need inspiration? How about **sturdy-disco**?

Description (optional)



Public

Anyone on the internet can see this repository. You choose who can commit.



Private

You choose who can see and commit to this repository.

Initialize this repository with:

Skip this step if you're importing an existing repository.

☐ **Add a README file**

This is where you can write a long description for your project. [Learn more](#).

☐ **Add .gitignore**

Choose which files not to track from a list of templates. [Learn more](#).

☐ **Choose a license**

A license tells others what they can and can't do with your code. [Learn more](#).

Create repository

- <https://herewecode.io/blog/a-beginners-guide-to-git-how-to-start-and-create-your-first-repository/>
- <https://docs.github.com/en/github/getting-started-with-github>

Your own README!

Create a repository
with name same as
your github
username.



Mona Lisa Octocat

octocato

Hi, I'm Mona 🙋 You might recognize
me as @github's mascot 🐱🐱

Edit profile

Overview

Repositories

Projects

Packages

octocato / README.md

Hi there 🙋

- 🌱 I'm currently working on something cool!
- 🌱 I'm currently learning with help from [docs.github.com](https://docs.github.com/en/github/setting-up-and-managing-your-github-profile/managing-your-profile-readme)
- 💬 Ask me about GitHub

Bravo !!

Send feedback



Pinned

Customize your pins

atom

Forked from atom/atom



The hackable text editor



JavaScript

vscode

Forked from microsoft/vscode

Visual Studio Code



TypeScript

<https://docs.github.com/en/github/setting-up-and-managing-your-github-profile/managing-your-profile-readme>

A Handy Tool

- Github commands at one place:

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

- Markdown Guide:

<https://guides.github.com/pdfs/markdown-cheatsheet-online.pdf>

Best Practices for Github

- Projects should have meaningful names and descriptions
- Projects should follow README practices
- The README may contain the purpose of the project, environment setup guide , how to run the project, any significant detail of the project etc.
- Do not put any OS configurations file or any other system files in github repository
- Make sure the code is clean, without any extra files.

Do not make any confidential data public, if your code uses any API keys remove it before uploading the code.

(Inspired from real life incident :P)

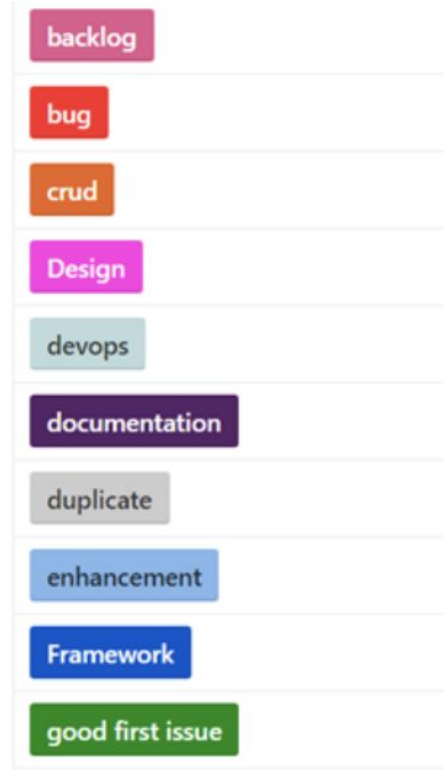




Getting Started with Open Source

Choosing an Issue

The first step when contributing to a project is to visit the project site and find an issue you would like to work on and which you think is suitable for your skill set. From the project homepage on GitHub you can click the Issues tab to navigate to a list of the open issues.



- Check the labels of the issue and comments before choosing it or working on it.
- If you are a beginner check out the issues with labels **good for first contribution , first timers only, ideal for beginners etc** in the repository of your relevant skills and interest.
- Some repositories are especially for beginners first start with that before going on to complicated source codes.
- Participating in open source hackathons can give a kickstart

👉 Want to contribute to Leaflet/Leaflet?

If you have a bug or an idea, read the [contributing guidelines](#) before opening an issue.
If you're ready to tackle some open issues, [we've collected some good first issues for you](#).

Filters

Labels 27

Milestones 6

New issue

414 Open ✓ 3,947 Closed

Author Label Projects Milestones Assignee Sort

Leaflet 1.7.1 causes 2 click events to be emitted by Leaflet Core

#7255 opened 14 hours ago by dankarran

5

Examples Should Relate to Tutorials - Using GeoJSON with Leaflet

#7254 opened yesterday by flywire

1

2 Finger zoom on Mobile does not work if 2 fingers placed at same

needs investigation

#7246 opened 11 days ago by FinduschkaLi

4

translate3d causes a rendering glitch in Mobile Safari on iOS

#7244 opened 13 days ago by googol7

Using the LimageOverlay class in the zoom map is some zoom

#7241 opened 17 days ago by WebHero0544

10

Polyline clipping causes infinite loop needs more info

#7235 opened 25 days ago by zypus

7

tileLayer "load" event fires before zoomAnimation is finished?

#7234 opened 27 days ago by foundryspatial-duncan

Filter by label

Filter labels

Unlabeled

0.7.x

accepted

android

api

archive

blocker

brainmelt

bug

compatibility

docs

feature

Contributing

- Every repository has different contributing guidelines read that before proceeding to any contribution. (Joining slack channels, IRLs helps a lot)
- Make sure you follow the coding practices and style of that repository
- Always have a relevant name to your branch and pull request
- If anything is unclear, don't hesitate to comment on the issue and ask
- There are lot of non coding issues like documentation available as well. It is not necessary to contribute only to coding issues.

Making your first contribution on GitHub

[First contributions](#) is a hands-on tutorial that walks you through contributions workflow on github. When you complete the tutorial, you have made a contribution to the same project.

If you don't have git on your machine, [install it](#).

Fork this repository

Fork this repository by clicking on the fork button on the top of this page. This will create a copy of this repository in your account.

Clone the repository

Now clone the forked repository to your machine. Go to your GitHub account, open the forked repository, click on the clone button and then click the *copy to clipboard* icon.

Open a terminal and run the following git command:

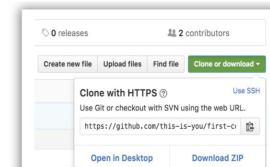
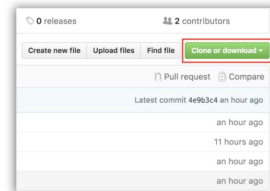
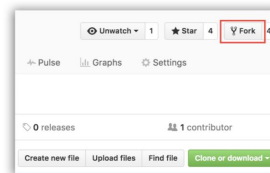
```
git clone "url you just copied"
```

where "url you just copied" (without the quotation marks) is the url to this repository (your fork of this project). See the previous steps to obtain the url.

For example:

```
git clone https://github.com/this-is-you/first-contributions.
```

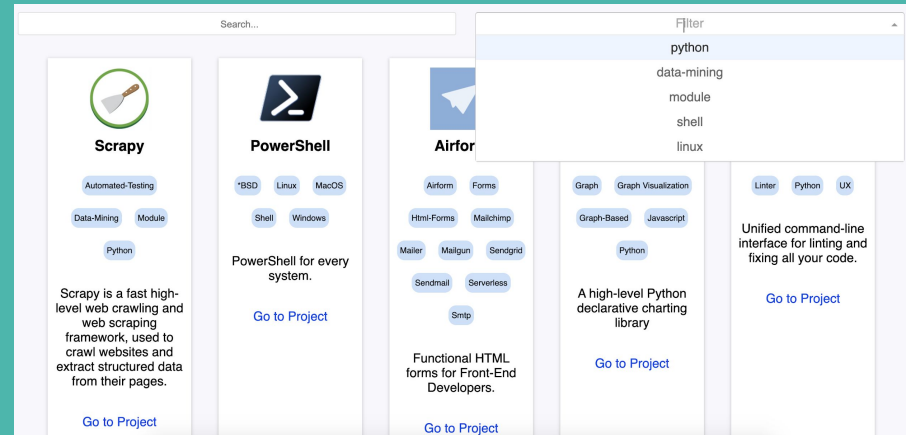
where `this-is-you` is your GitHub username. Here you're copying the contents of the first-contributions repository on GitHub to your computer.





Clueless?

Find projects from here 📌



<https://firstcontributions.github.io/>

- <https://up-for-grabs.net> is a site that aggregates (rolls up and makes easy to explore) projects that actively want help. They label those projects with things like **“up-for-grabs”, “jump-in” or “help wanted.”**
- goodfirstissues.com is a site that aggregates the latest issues with the label **“Good First Issue”**, which is a GitHub feature for finding easy issues to tackle
- **CodeTriage** helps you subscribe to your favorite open-source projects and **get a new open issue from them in your inbox** every day.

Types of coding contributions

- Writing code that implements new features. ([See this issue](#))
- Creating patches / solving bugs reported as issues by users.
- Reviewing Pull requests of other developers by advising them on how to refactor and improve their code.
- Writing unit tests for existing code that has no tests in the code base to improve test-coverage.

Submitting a PR

- Write useful descriptions and titles
- Owner of the repository will use this to decide whether to accept your change
- Have on-point commit messages (write the objective of PR in not more than 10 words)
 - Avoid names like “feedback improvement”, “final commit”, “final final commit”, etc.
- Attach screenshots of visual changes have been made
- Read More: [\[1\]](#), [\[2\]](#)



yahonda commented 12 days ago • edited ▾

Contributor + 😊

Summary

Unlike other databases, changing SQLite3 table definitions need to create a temporary table. While changing table operations, the original table needs dropped which caused `SQLite3::ConstraintException: FOREIGN KEY constraint failed` if the table is referenced by foreign keys. This pull request disables foreign keys by `disable_referential_integrity`.

Also `disable_referential_integrity` method needs to execute `defer_foreign_keys = ON` to defer re-enabling foreign keys until the transaction is committed.

https://www.sqlite.org/pragma.html#pragma_defer_foreign_keys

Fixes #31988

Other Information

- This pull request has been validated with sqlite3 3.8.2 on Ubuntu 14.04 LTS and sqlite3 3.22.0 on Ubuntu 18.04 LTS.

```
$ sqlite3 --version
3.8.2 2013-12-06 14:53:30 27392118af4c38c5293a04b8013e1afdb1cebd0d
```

```
$ sqlite3 --version
3.22.0 2018-01-22 18:45:57 0c55d179733b46d8d0ba4d88e01a25e10677046ee3da1d5b1581e86726f2alt1
```

This feature has been introduced since

[SQLite Release 3.8.0 On 2013-08-26](#). Also according to git blame at cloned SQLite repository, `defer_foreign_keys` pragma has been implemented since version-3.8.0 [mackyle/sqlite@ 8ebb3ba](#)

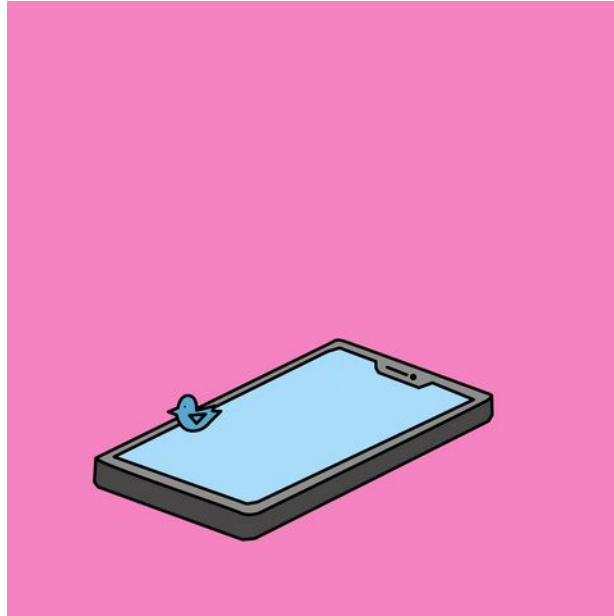
- `.reset_column_information` added to address `ActiveModel::UnknownAttributeError`

```
Error:
ActiveRecord::Migration::ForeignKeyChangeColumnTest#test_change_column_of_parent_table:
ActiveModel::UnknownAttributeError: unknown attribute 'name' for ActiveRecord::Migration::Fo
```



1

**“YOU NEED TO HAVE CODING SKILLS TO
CONTRIBUTE TO OPEN-SOURCE”**




Non-code ways to contribute

1. Translation (internationalization / localization): Try asking the maintainers
2. Technical writing
 - a. **Documentation:** [Google Season of Docs](#)
 - b. Proposals (eg. design)
 - c. Tutorials, [like PyPA's contributors did](#)
 - d. QnAs (Contributing to StackOverflow counts too!)
3. Designing
 - a. Improving UI, UX (user interface and design)
 - b. Logo creating; [See this issue](#)
4. Reporting Issues
 - a. From bugs and edge cases to UI/UX issues, like buttons that seem to be inconveniently located or confusingly named. (even typos too 🐛)
 - b. If you can include screenshots and steps for reproducing a bug, that is extremely helpful for the folks fixing it.
5. Organize and participate in meetups; [See this issue](#)
6. Curate resources for others (Kudos to Shikha!)


Example Workflow


1. Open an issue/Read already open issues

 Leaflet / Leaflet

[Code](#) [Issues 414](#) [Pull requests 144](#) [Actions](#) [Projects 1](#) [Security](#) [Insights](#)

fitBounds with padding zooms the map really far out #4528

 Closed theashyster opened this issue on 3 May 2016 · 19 comments

 theashyster commented on 3 May 2016 Contributor

I am not sure if this is a regression or not, but I have experienced that since the RC1 release the map `fitBounds` function with `padding` option does not work the same way as it worked before.


Some examples:

- Leaflet 0.7.5 <http://playground-leaflet.rhcloud.com/niv/edit?html,output>
- Leaflet 1.0.0-beta.2 <http://playground-leaflet.rhcloud.com/jasi/edit?html,output>
- Leaflet 1.0.0-rc.1 <http://playground-leaflet.rhcloud.com/cipe/edit?html,output>

The padding is just really big and the map is zoomed far out. We have used this function with the padding on layer containing SVG polygon also and since RC1 that also started to act strange by zooming the map really far out.

I can get the same result on RC1 by setting the `padding` option on a point that is really small `L.point(0.001, 0.001)`.

2. Read owner's comments and see the labels (up for contributions or not)



IvanSanchez commented on 3 May 2016 • edited ▾


Member 😊 ⋮

The culprit seems to be [this line](#):


```
boundsSize = this.project(se, zoom).subtract(this.project(nw, zoom)).add(padding),
```

That's getting the size (in pixels) of the bounds to fit, **at the current zoom level**, *then* adding the padding.

What we really want is to have the padding at the *destination* zoom level, not at the *original* zoom level.



IvanSanchez added **needs solution** and removed **needs investigation** labels on 3 May 2016



IvanSanchez commented on 3 May 2016 • edited ▾


Member 😊 ⋮

A possible solution would be to subtract `padding` from `size` - but that needs testing.

I think this is a rather self-contained, explained bug, so I think any newbie can try fixing this. (Hello, [@yourfirstpr!](#)).


Things to be done:



- ☒ Let people know you're interested
- ☐ Fork the leaflet repo and clone it locally
- ☐ Modify `src/map/Map.js` around line 509 so that `padding` is subtracted from `size` (instead of being added to `boundsSize`)
- ☐ Add some unit tests to `spec/map/MapSpec.js`, next to the tests for `getBounds()` - ensure that calls to `getBoundsZoom()` with small areas and big padding returns high levels of zoom (currently it returns low levels like 0 and 1)
- ☐ Run `npm install`, `npm test`
- ☐ `git commit`, `git push`
- ☐ Create merge request




IvanSanchez added **help wanted** **good first issue** and removed **needs solution** labels on 3 May 2016


3. Express your interest to contribute. Once done, reference to your PR





dianjin commented on 3 May 2016 Contributor  

I would love to do this! Thanks for the guide, I'll follow it and let you know my results. 😊

 10





hyperknot commented on 3 May 2016 Collaborator  

I'd just like to add to the list:


- ☐ test it with the default zoomSnap: 1 option
- ☐ test it with a fractional zoomSnap, like 0.25
- ☐ test it with zoomSnap: false or 0



For development of fitBounds I believe the best is to use zoomSnap: 0, as snapping to an integer zoom level will usually add a big padding on it's own.



dianjin mentioned this issue on 4 May 2016

getBoundsZoom with small size and padding #4532 Merged



dianjin commented on 4 May 2016 Contributor  

Here's what I have so far: [#4532](#)

Please let me know if I did everything correctly!

Miscellaneous

Q. Are there any clubs/departments/groups in BITS for open source or development? SAiDL, Project Kratos

Q. Which languages/tech stack should we focus on learning to effectively contribute? Markdown, Git, Docker, etc. are used by almost every project. Rest is project specific.

Q. What is the application process of WWDC Scholarship? Applications open in March-mid, early-April. Develop an interactive playground (something like a dynamic UI - stories, animations, digital books, etc.) using Swift language. Having either an iPad or a Mac is a must.

Tips

1. **Don't hesitate to contact** the repository's owner or your mentor for the smallest of doubts
2. **First-time installation** of the project on your system can be messy and frustrating
3. It's absolutely fine if your PR doesn't get accepted for the first time. Make optimum use of the comments/feedback received.
4. Don't rely just on the GitHub UI. Keep yourself well-versed with CLI too.

Useful Links

<http://archaeogeek.github.io/foss4gukdontbeafraid/index.html>

<https://www.hackerearth.com/getstarted-opensource/>

<https://dev.to/realabbas/curated-list-of-open-source-programs-events-and-competitions-4cfk>

<https://www.outreachy.org/outreachy-may-2020-internship-round/>