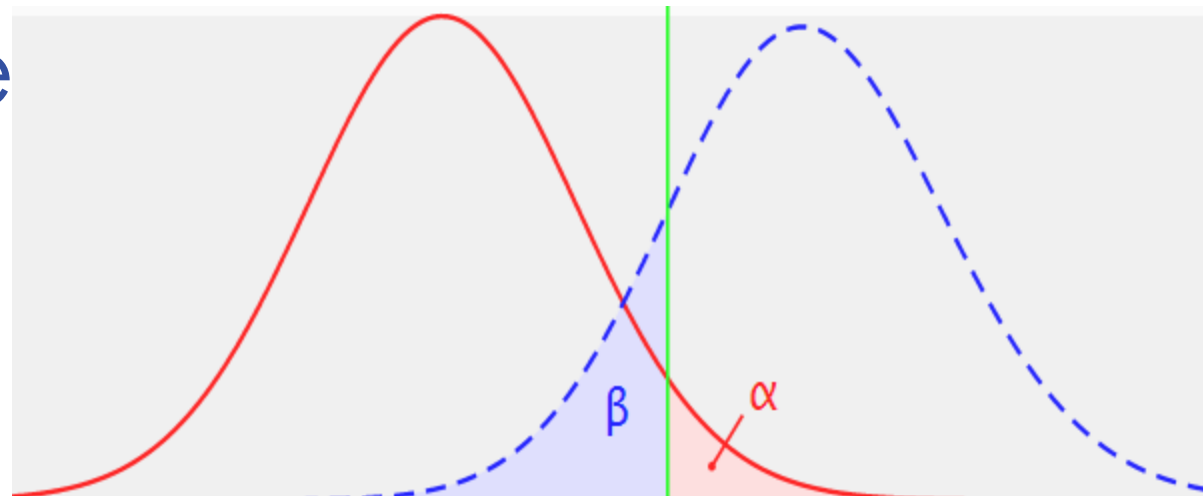
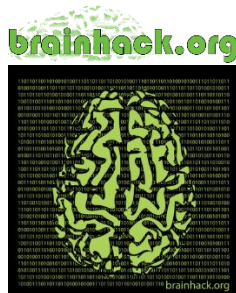
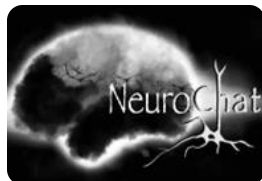


# COSN Chinese Open Science Network

## 1st COSN hackathon

May the **POWER** be with you!

Aug. 27<sup>th</sup>-28<sup>th</sup> 2022, Online



# Chinese Open Science Network

*Aug. 27<sup>th</sup>, Day 1, #TrainTrack*

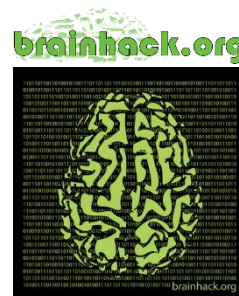
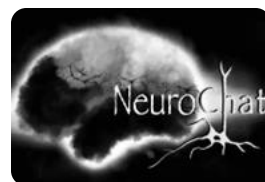
## *Hackathon Essentials*

Git/GitHub

*Qing Wang (Vincent)*

*The Neuro, McGill Univ.*

*Vincent.w.qing@gmail.com*



# Rule No.1: Stay connected and get your hands dirty!

- **Keynotes and online Discussions**



<https://mcgill.zoom.us/j/9209434203>

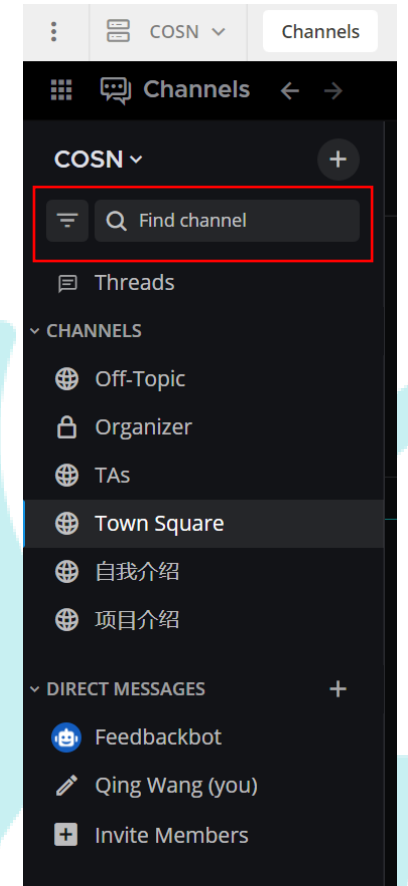
- **Official notification and instant communication**



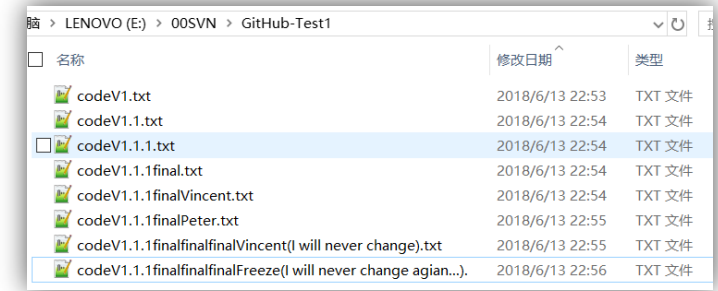
- **Hackathon projects repo**



<https://github.com/OpenSci-CN/SummerHackathon2022.git>



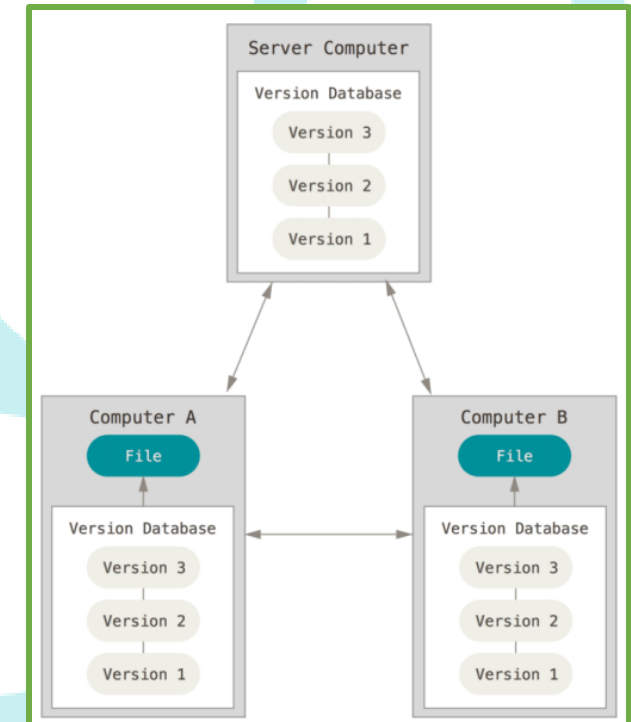
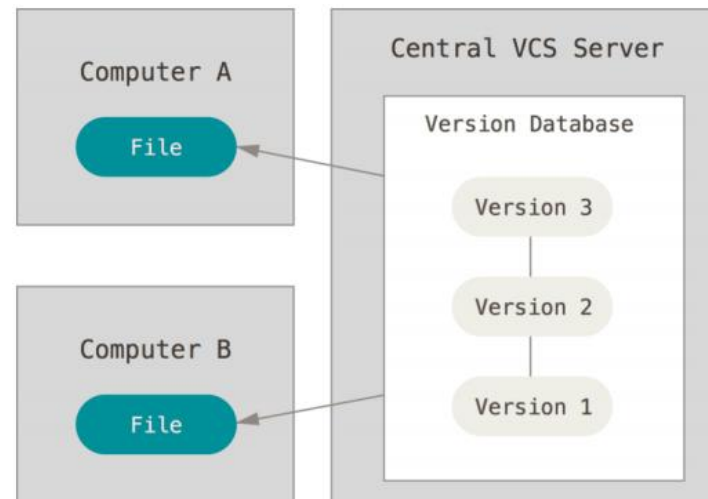
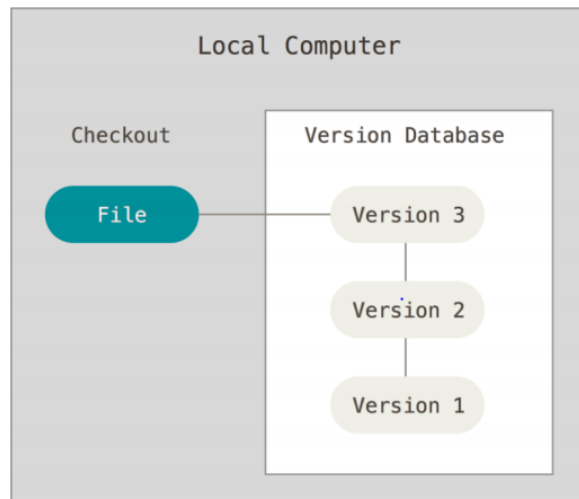
# 1. What and why is Git/GitHub?



名称	修改日期	类型
codeV1.txt	2018/6/13 22:53	TXT 文件
codeV1.1.txt	2018/6/13 22:54	TXT 文件
codeV1.1.1.txt	2018/6/13 22:54	TXT 文件
codeV1.1.1final.txt	2018/6/13 22:54	TXT 文件
codeV1.1.1finalVincent.txt	2018/6/13 22:54	TXT 文件
codeV1.1.1finalPeter.txt	2018/6/13 22:55	TXT 文件
codeV1.1.1finalfinalVincent(I will never change).txt	2018/6/13 22:55	TXT 文件
codeV1.1.1finalfinalFreeze(I will never change agian...).	2018/6/13 22:56	TXT 文件

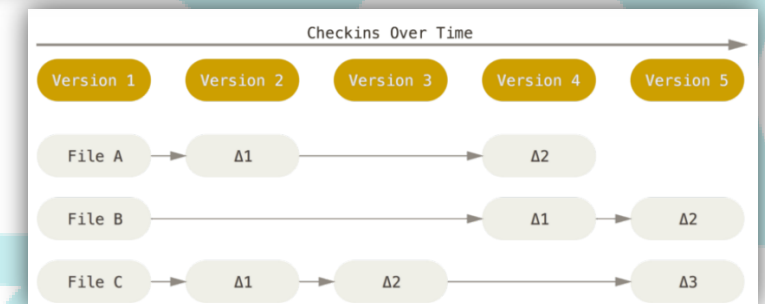
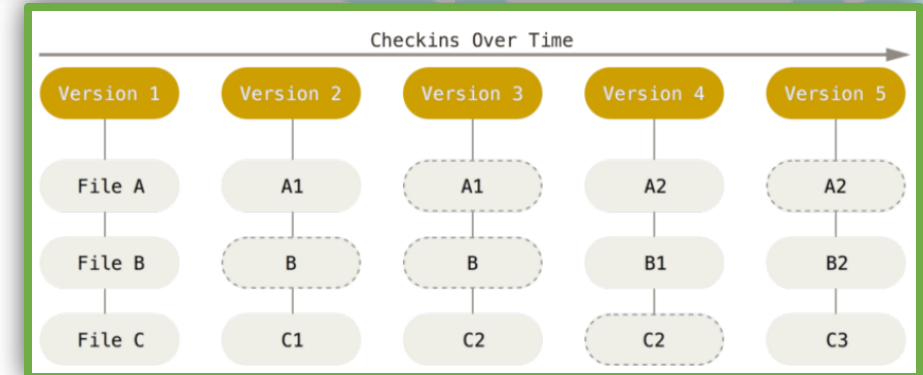
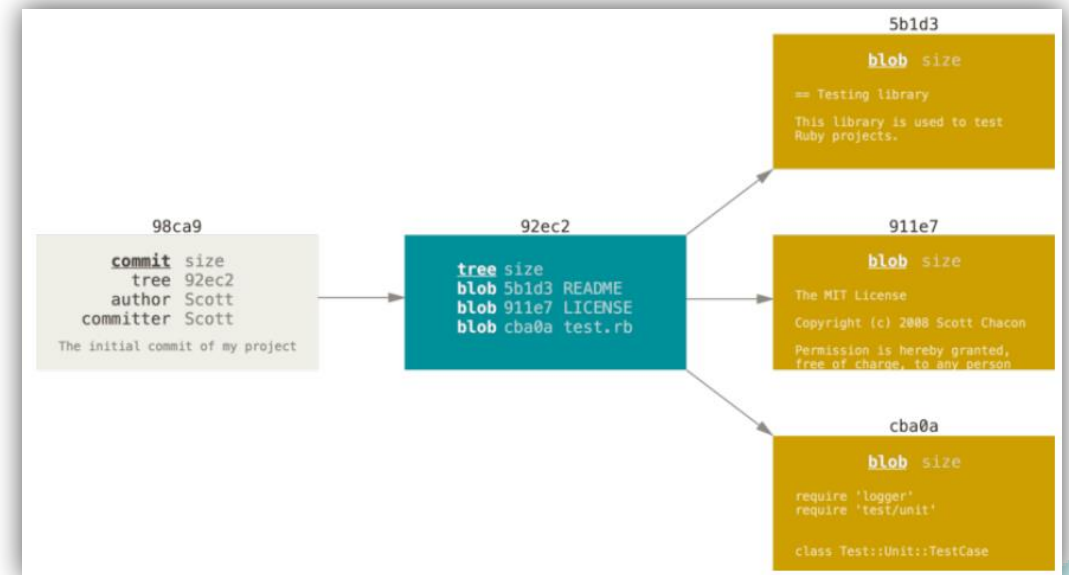
## Collaborative coding with version control

- Centralized Version control System (SVCS, CVS Subversion...)
- Distributed Version Control System (DVCS, **Git**, Mercurial, Bazaar...)



# 1. What and why is Git/GitHub?

- **Git (tool )**
- **GitHub (platform, online service)**
  - hosts your repositories (projects)
  - helps you work with collaborators
  - interface support
    - Online
    - GitHub Desktop App
    - Commandline using 'Git'
    - RStudio for R fans



**Basic mechanism** (commit object)

# 2. Basics

## concepts1

### Repository (Repo)

a project where all your files are, online or on your computer

\$ git init

### Commit

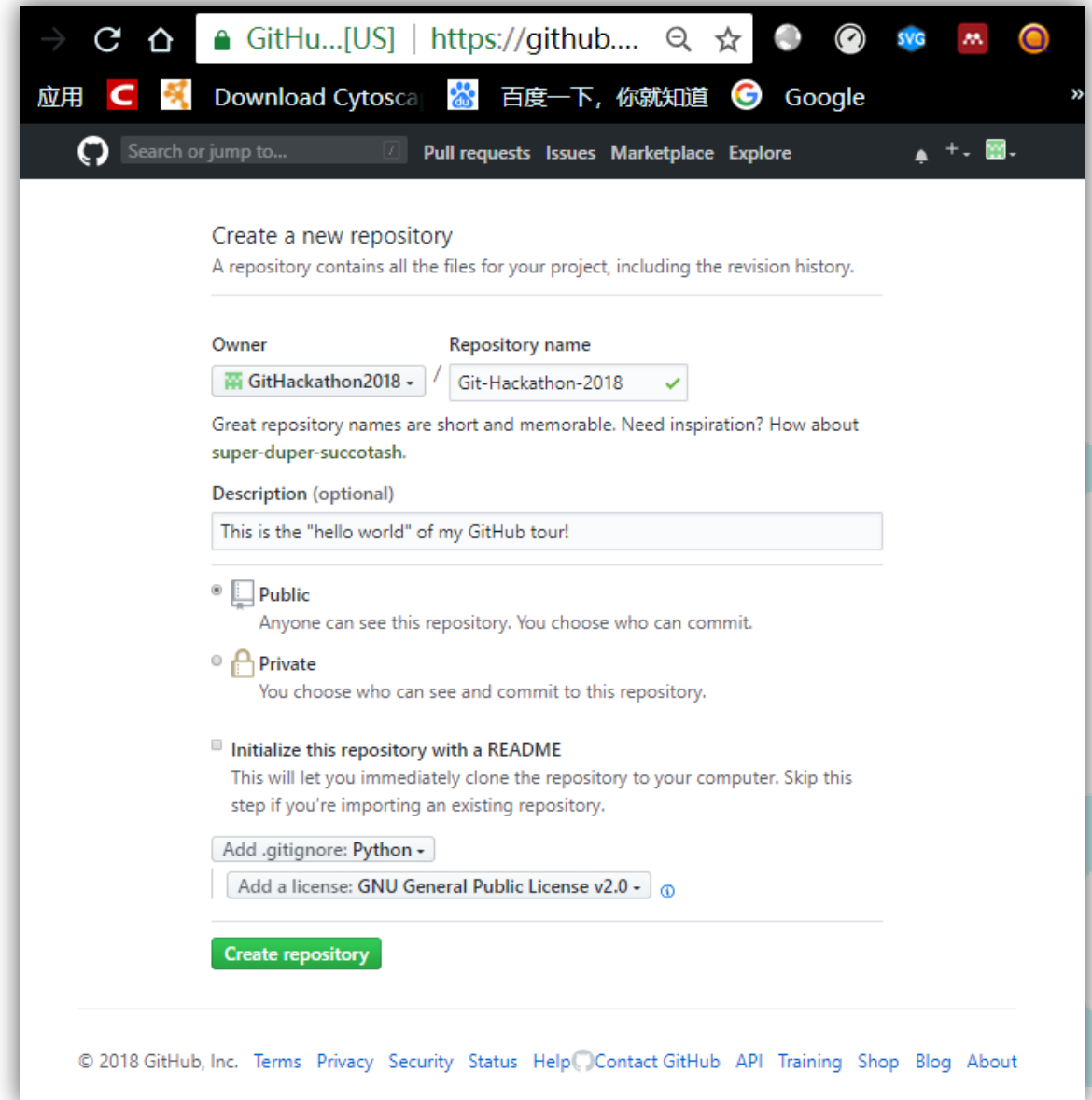
saving a version of file(s) or snapshot

\$ git add README.md

\$ git commit -m 'My first commit'

### Issues

to-do list of tasks, bugs and things you wish to accomplish



# 2. Basics

## concepts2

### Branch

A new version of project that goes parallel with the master branch.

### Pull request (PR)

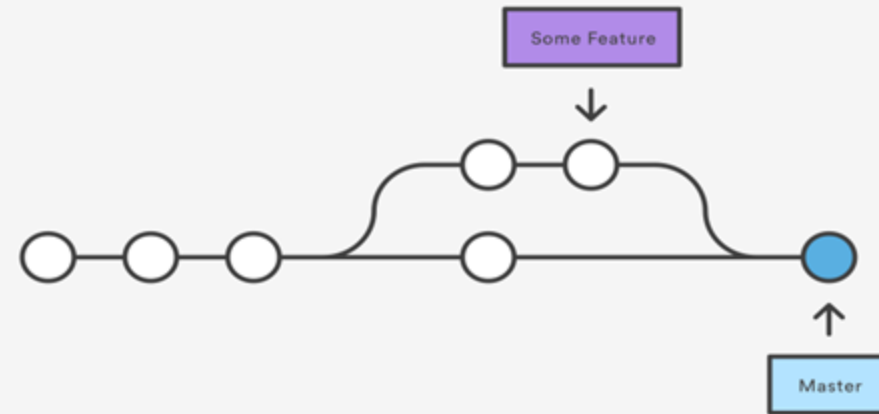
request to add your changes from a branch back into master

### Push Request

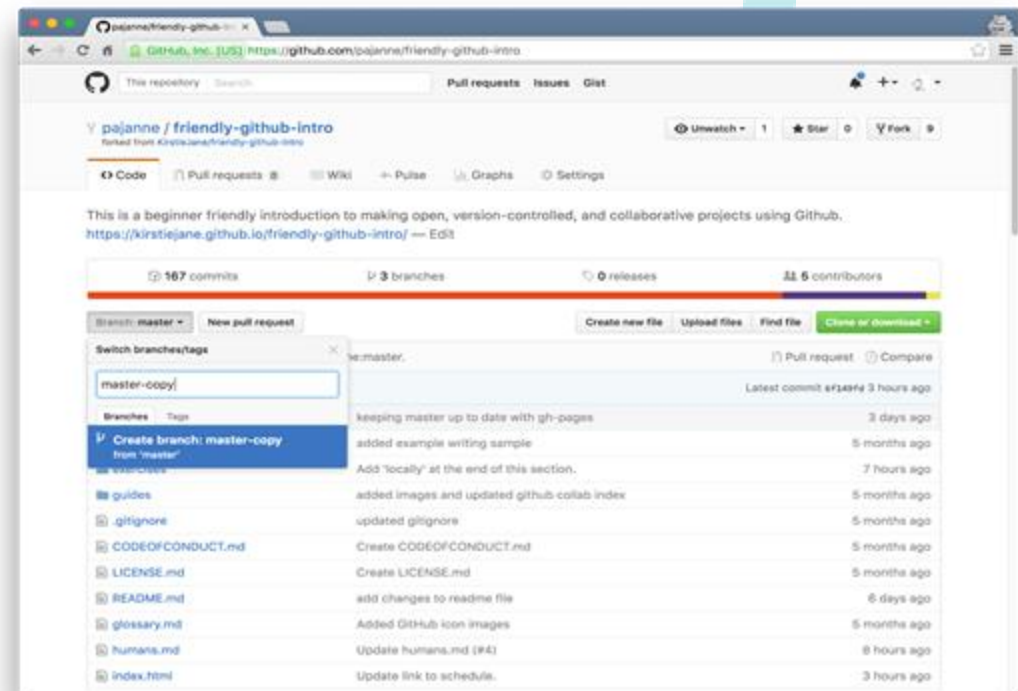
request to add your changes from local branch into remote branch

### Merge

act of incorporating new changes (commits) from one branch to another



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





# 2. Basics

## Web GUI

Create & manage “**Issues**”

**Pull Request** to add your changes into forked repo

**Fork** this repo

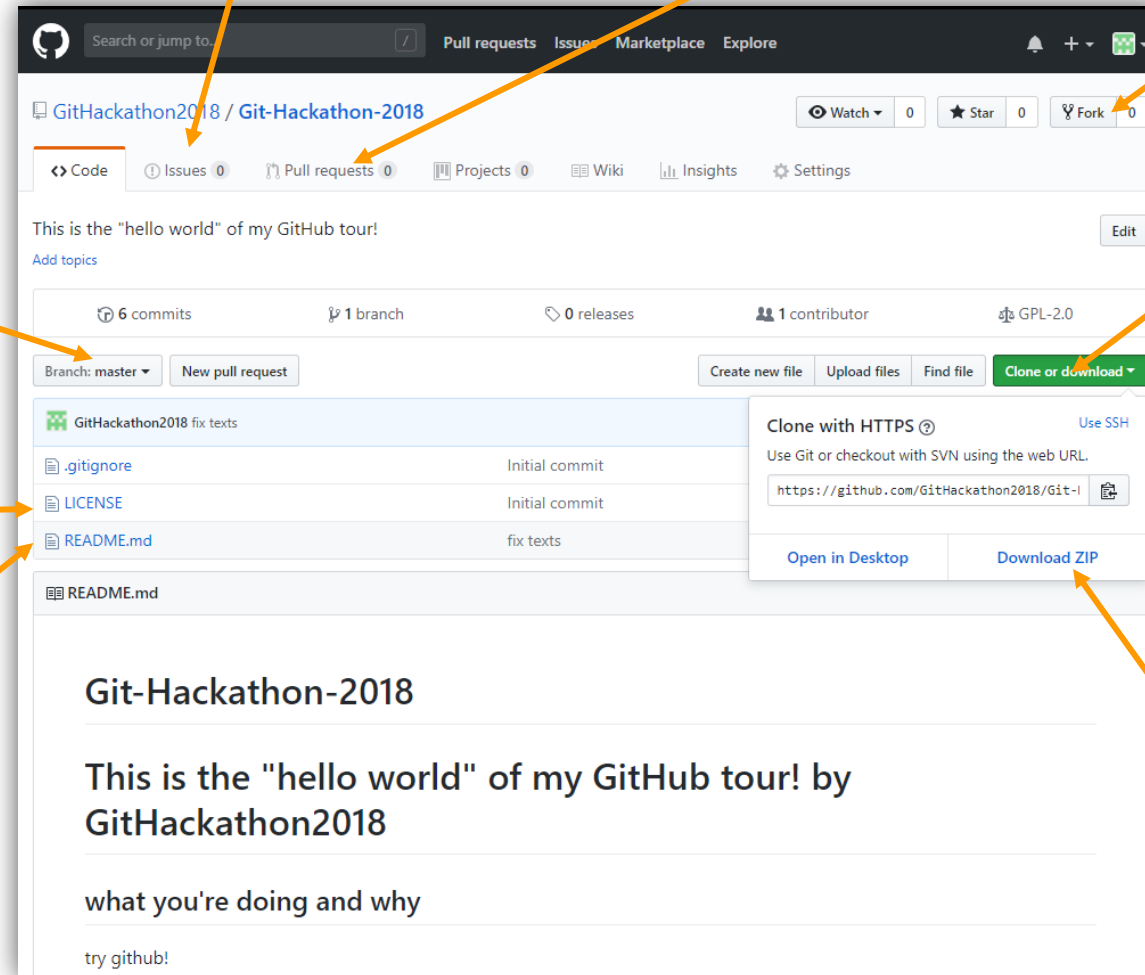
Your default **branch** is “master” - but you can switch or add branches here

Choose the license  
“**LICENSE.md**”

The “**README.md**” is automatically rendered when you visit a repo

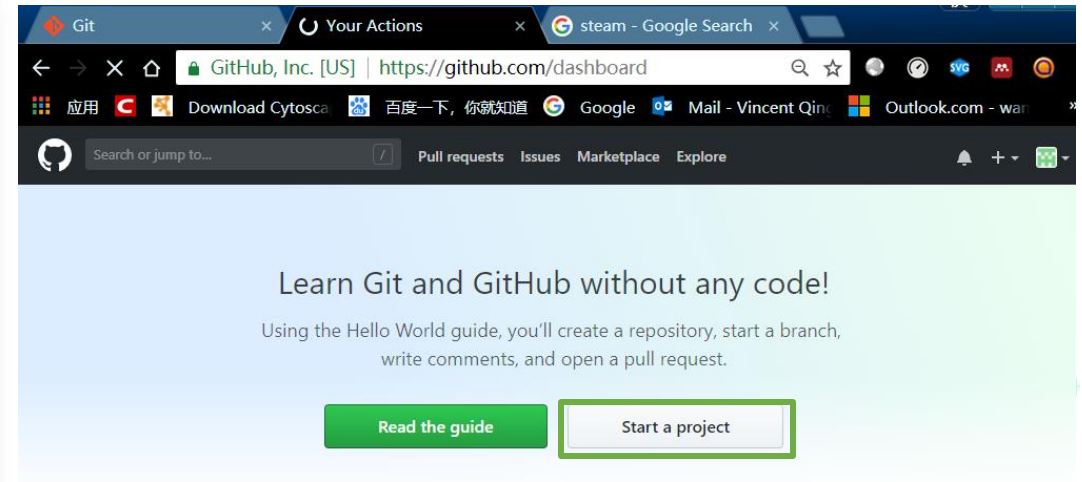
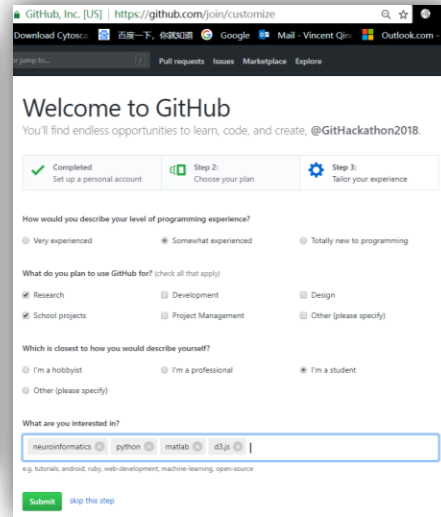
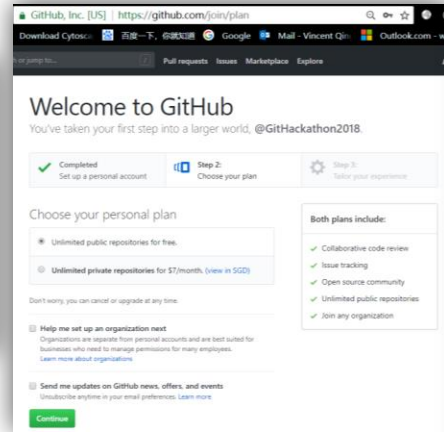
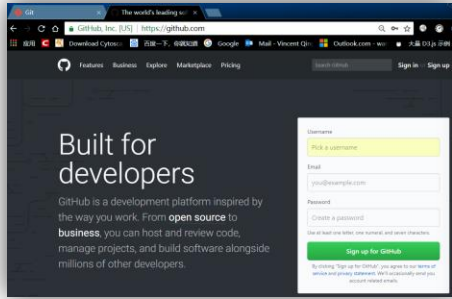
**Clone** to your computer from the web using GitHub Desktop or git command

**Download Zip** to download the zipped repo onto your computer

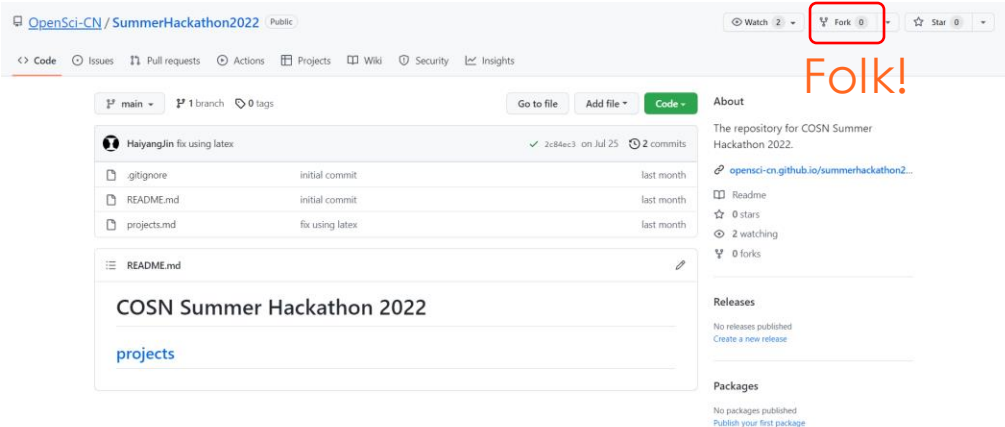




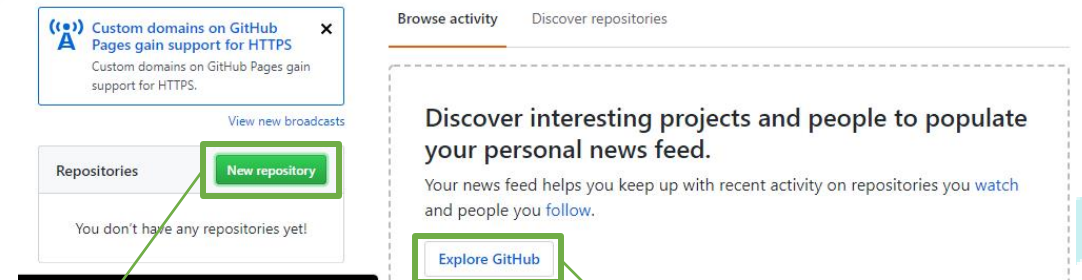
# Register



<https://github.com/>



Folk!



Create your repo

Explore other projects

<https://github.com/OpenSci-CN/SummerHackathon2022>



# Fork and Get your own clone!

The image shows a two-part screenshot of the GitHub interface. The left part shows the 'Create a new fork' page for the repository 'OpenSci-CN / SummerHackathon2022'. The right part shows the repository page for the forked version 'Vincent-wq / SummerHackathon2022' with a 'Code' dropdown menu open, showing options to clone or download the repository.

**Left Panel: Create a new fork**

OpenSci-CN / SummerHackathon2022 Public Watch 2 Fork 0 Star 0

Create a new fork

A fork is a copy of a repository. Forking a repository allows you to freely experiment with changes without affecting the original project.

Owner \* Vincent-wq / Repository name \* SummerHackathon2022 ✓

By default, forks are named the same as their parent repository. You can customize the name to distinguish it further.

Description (optional)  
The repository for COSN Summer Hackathon 2022.

☒ Copy the main branch only  
Contribute back to OpenSci-CN/SummerHackathon2022 by adding your own branch. [Learn more.](#)

*i* You are creating a fork in your personal account.

Create fork

**Right Panel: Vincent-wq / SummerHackathon2022**

forked from OpenSci-CN/SummerHackathon2022

Pin Watch 0

main

This branch is up to date with OpenSci-CN/SummerHackathon2022:main.

HaiyangJin fix using latex ...

.gitignore initial c  
README.md initial c  
projects.md fix using

Code

Clone

HTTPS SSH GitHub CLI

<https://github.com/Vincent-wq/SummerHackathon2022>

Use Git or checkout with SVN using the web URL.

Open with GitHub Desktop

Download ZIP

<https://github.com/OpenSci-CN/SummerHackathon2022>

# 2. Basics

## README.md

The basic description of the repo

- In root directory
- In markdown (.md)
- All caps

The left screenshot shows the GitHub repository page for 'GitHackathon2018 / Git-Hackathon-2018'. It displays the repository's overview, including the 'Code' tab, commit history (5 commits), and a list of files: .gitignore, LICENSE, and README.md. The README.md file is highlighted, showing its commit history.

The right screenshot shows the 'README.md' file being edited. The content of the file is as follows:

```
1 # Git-Hackathon-2018
2 This is the "hello world" of my GitHub tour!
3 by GitHackathon2018
4 =====
5 ## what you're doing, for who, and why
6 try github!
7
8 ## what makes your project special and exciting
9 This is the first step to git/github!
10
11 ## how to get started
12 This is what we are going to do!
13
14 ## where to find key resources
15
16 ### main website
17 https://git-scm.com/
18 https://github.com/
19
20 ### Mark down
21 https://github.com/adam-e/markdown-here/wiki/Markdown-Cheatsheet
22
23 ### tutorial
24 https://kirstieane.github.io/friendly-github-intro/
25
26 ### CONCEPTS
27 ##### Branch
28 - an identical copy of a project at a particular point in time kept separate from the 'master' branch (copy). This keeps your code in the 'master' branch safe while you make changes and experiment with new branch. You can **merge** your new branch back into the 'master' branch when you want to publish changes.
```

# 2. Basics

## markdown

- Language of documents
- GitHub automatically renders anything written in Markdown

### Headers

```
# H1
## H2
### H3
#### H4
##### H5
##### H6
```

Alternatively, for H1 and H2, an underline-ish style:

```
Alt-H1
=====
```

```
Alt-H2
-----
```

## H1

## H2

### H3

#### H4

##### H5

###### H6

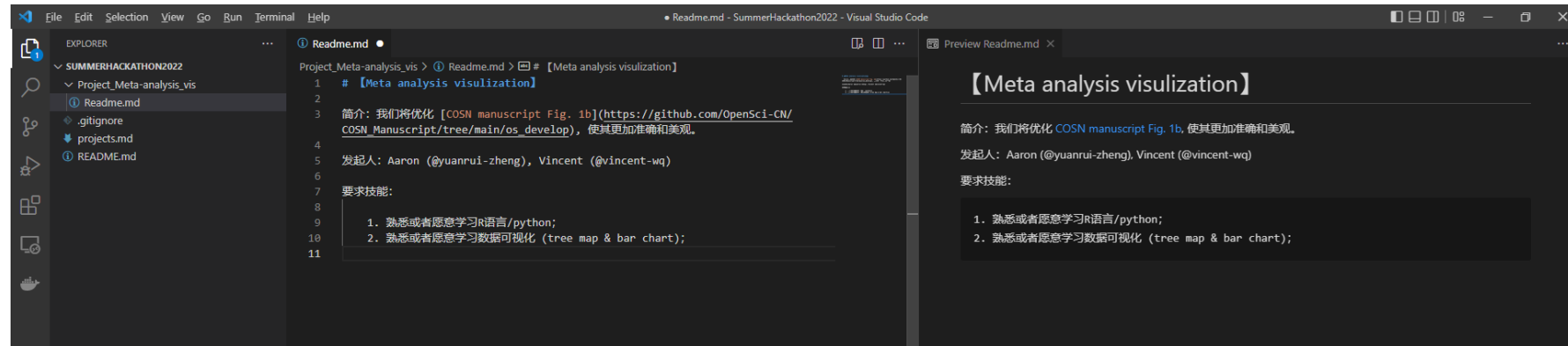
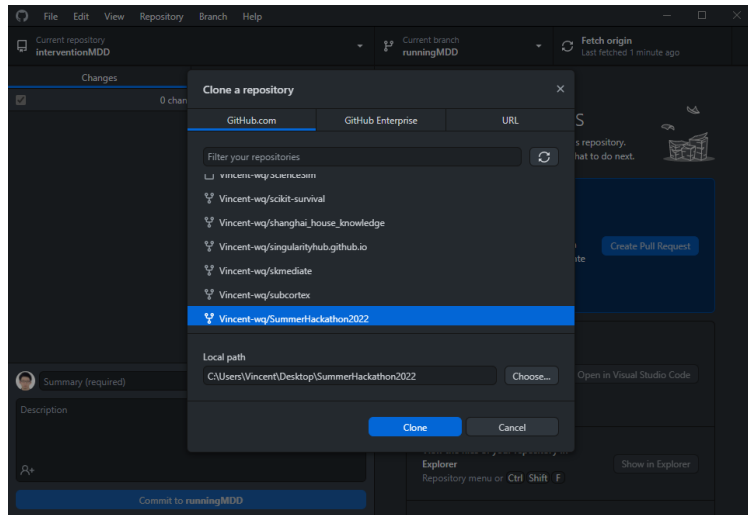
Alternatively, for H1 and H2, an underline-ish style:

## Alt-H1

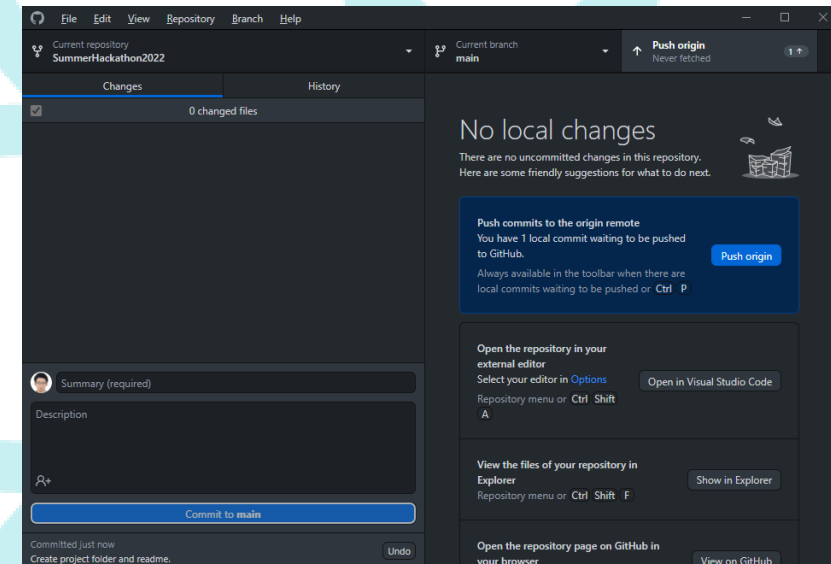
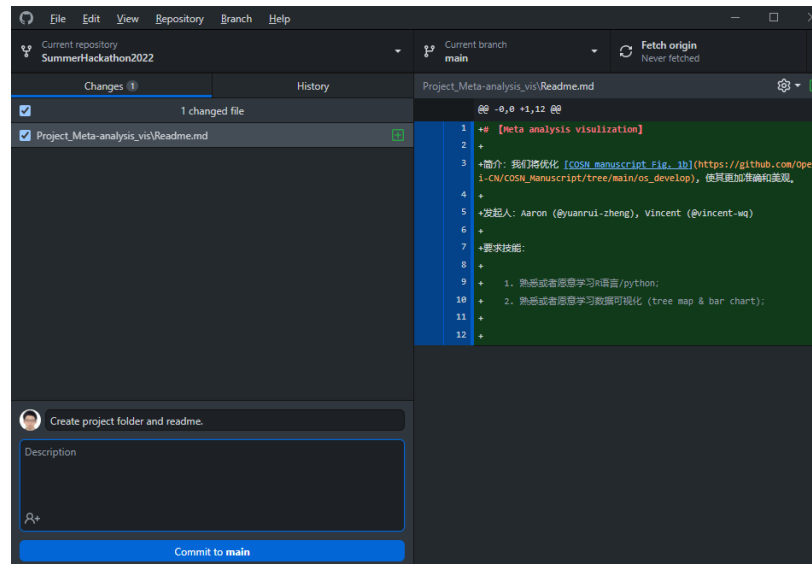
## Alt-H2

# Adding and editing files/codes!

## Create your project folder and README.md!



## Give it a Push!



# Create PR and contribute!

**Open a pull request**  
Create a new pull request by comparing changes across two branches. If you need to, you can also [compare across forks](#).

base repository: OpenSci-CN/SummerHackatho... base: main ← head repository: Vincent-wq/SummerHackatho... compare: main

✓ Able to merge. These branches can be automatically merged.

**Create project folder and readme. #1**

Vincent-wq commented now

No description provided.

✓ This branch has no conflicts with the base branch  
Merging can be performed automatically.

**Merge!**

Merge pull request

**OpenSci-CN / SummerHackathon2022**

Vincent-wq Merge pull request #1 from Vincent-wq/main

Project\_Meta-analysis\_vis Create project folder and readme.

**【Meta analysis visulization】**

简介: 我们将优化 COSN manuscript Fig. 1b, 使其更加准确和美观。

发起人: Aaron (@yuanrui-zheng), Vincent (@vincent-wq)

要求技能:

1. 熟悉或者愿意学习Python语言/python;
2. 熟悉或者愿意学习数据可视化 (tree map & bar chart);

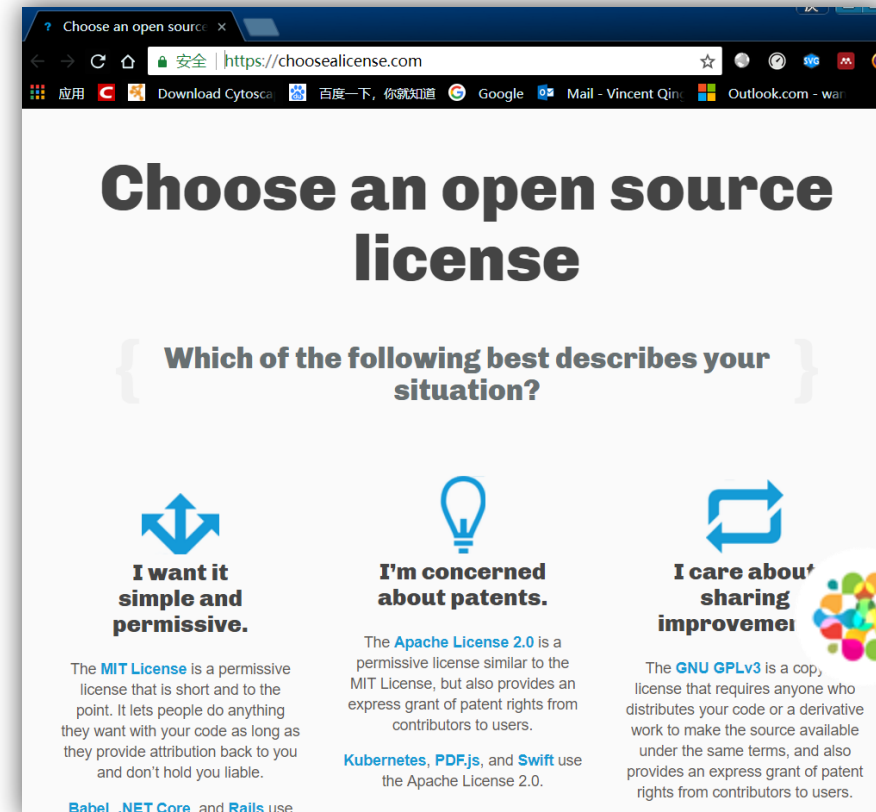
# 2. Basics

## LICENSE.md

### Finding the right license

It's about how people can use that project;  
[ChooseALicense.com](https://choosealicense.com) to help you make decision.

- In root directory
- In markdown (.md)
- All caps



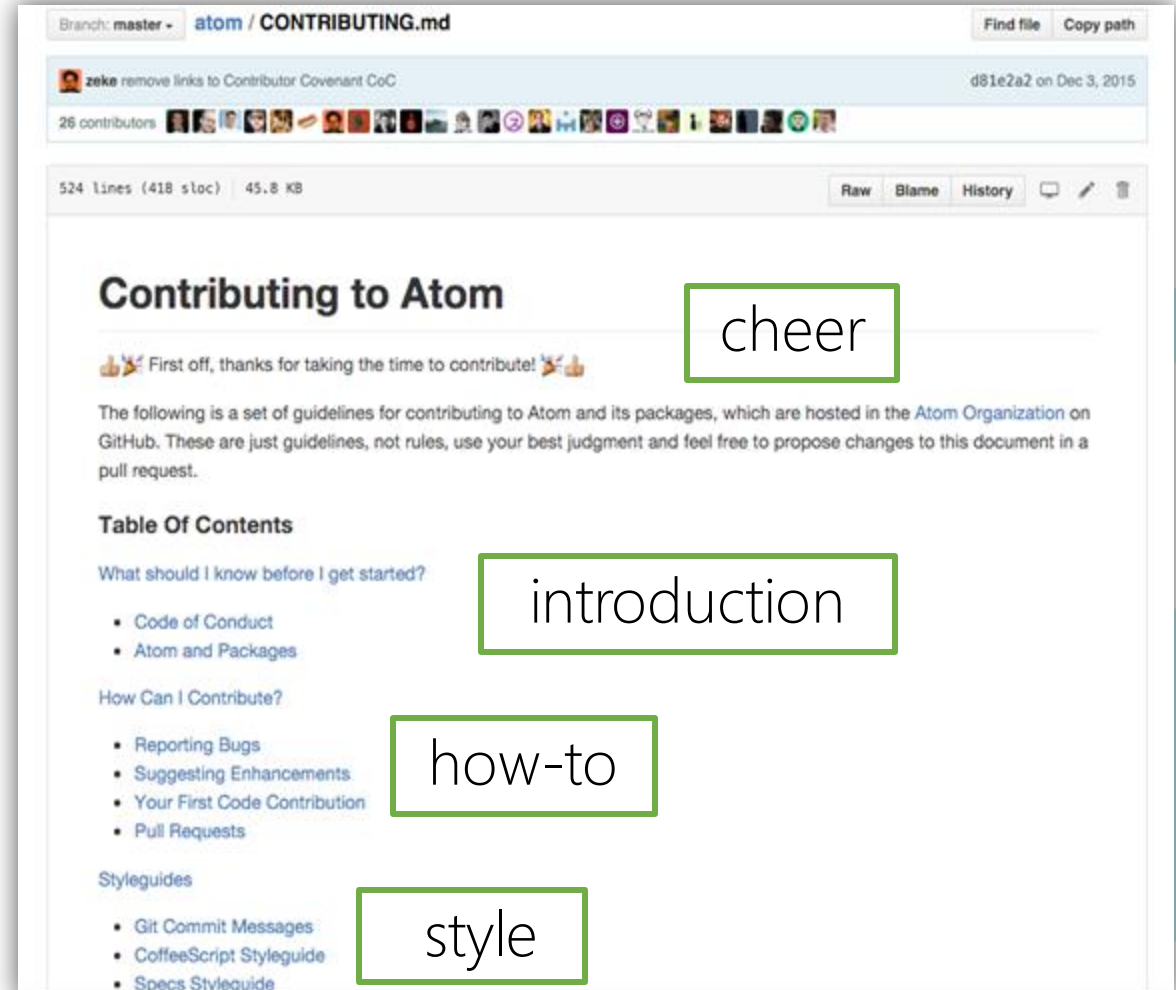


# 2. Basics

## CONTRIBUTING.md

- In root directory
- In markdown (.md)
- All caps

## Guidelines for the contributors



Branch: master - atom / CONTRIBUTING.md

zeke remove links to Contributor Covenant CoC d81e2a2 on Dec 3, 2015

26 contributors

524 lines (418 sloc) 45.8 KB

Raw Blame History

### Contributing to Atom

👋 First off, thanks for taking the time to contribute! 🙌

The following is a set of guidelines for contributing to Atom and its packages, which are hosted in the [Atom Organization](#) on GitHub. These are just guidelines, not rules, use your best judgment and feel free to propose changes to this document in a pull request.

#### Table Of Contents

What should I know before I get started?

- [Code of Conduct](#)
- [Atom and Packages](#)

How Can I Contribute?

- [Reporting Bugs](#)
- [Suggesting Enhancements](#)
- [Your First Code Contribution](#)
- [Pull Requests](#)

Styleguides

- [Git Commit Messages](#)
- [CoffeeScript Styleguide](#)
- [Specs Styleguide](#)

cheer

introduction

how-to

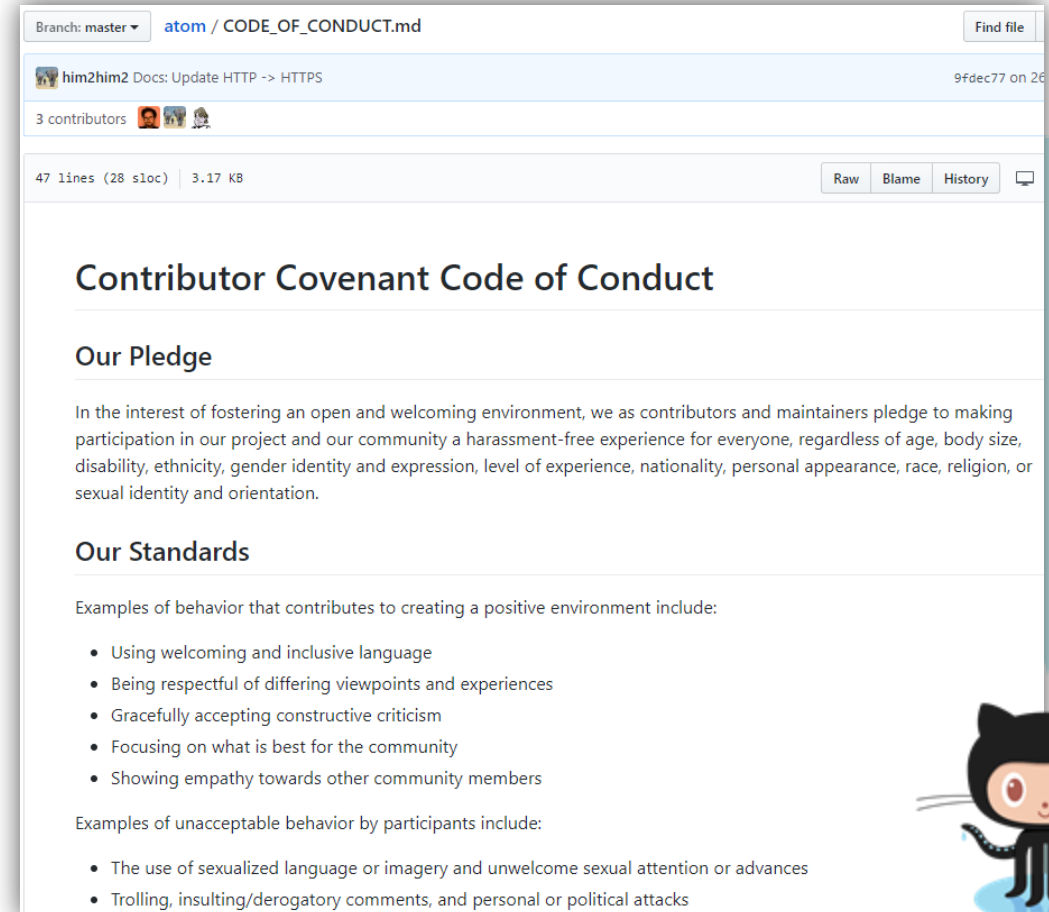
style

# 2. Basics

## CODEOFCONDUCT.md

**Rules** outlining the social norms & rules & responsibilities of an individual project, party or organization

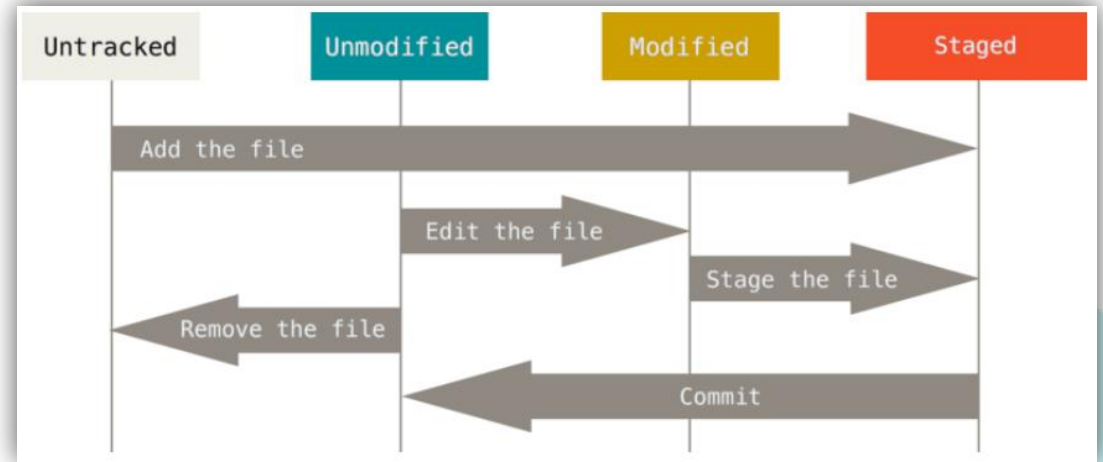
- In root directory
- In markdown (.md)
- All caps



# 3. Teamwork and OPEN SCIENCE

```
$ git init
$ git add file.x
$ git commit -m -a 'initial project version'
$ git clone https://github.com/libgit2/libgit2 mylibgit
$ git status (-s, --short)
$ cat .gitignore (*.o)
$ git rm README.md
$ git mv file_from file_to
```

## Working with Git commands

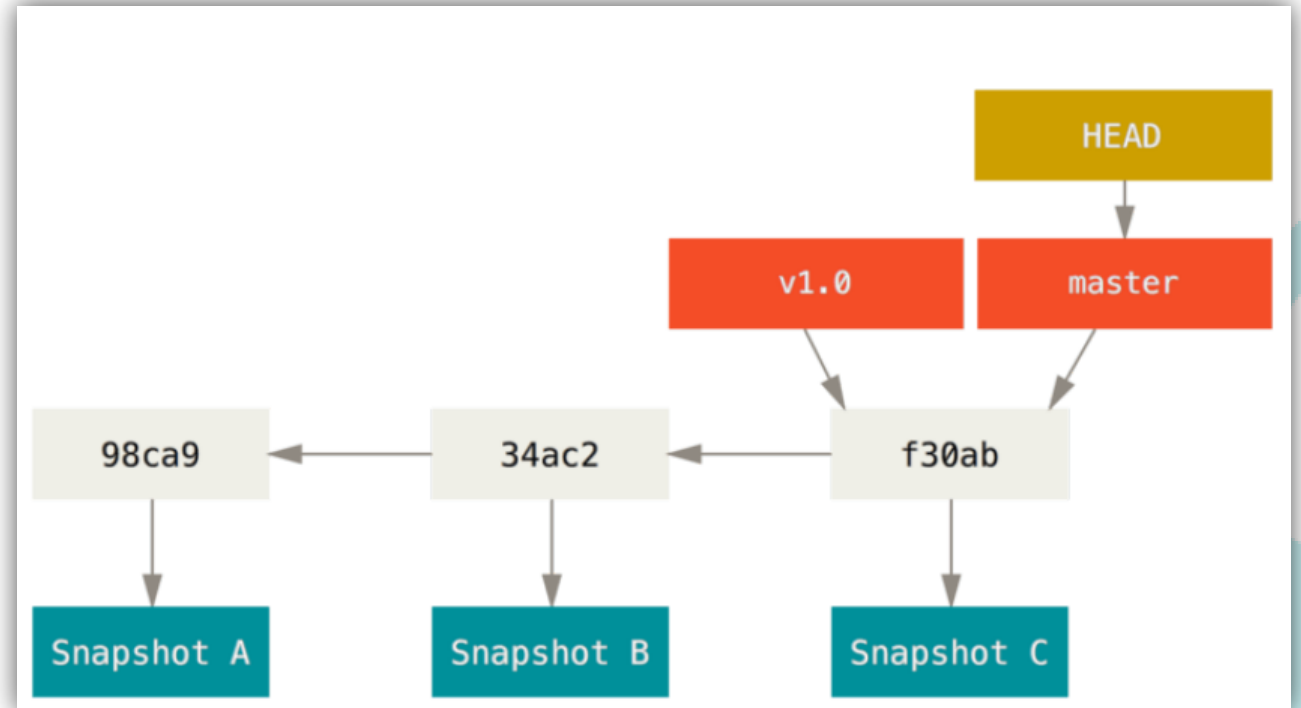


```
$ git log (--pretty=format)
$ git tag
$ git show v1.4
$ git config --global alias.co checkout
$ git revert commit_id
```

# 3. Teamwork and OPEN SCIENCE

- Current branch (HEAD)
- Create Branch
  - \$ git branch v1.0
- Change Branch
  - \$ git checkout v1.0

## Branching

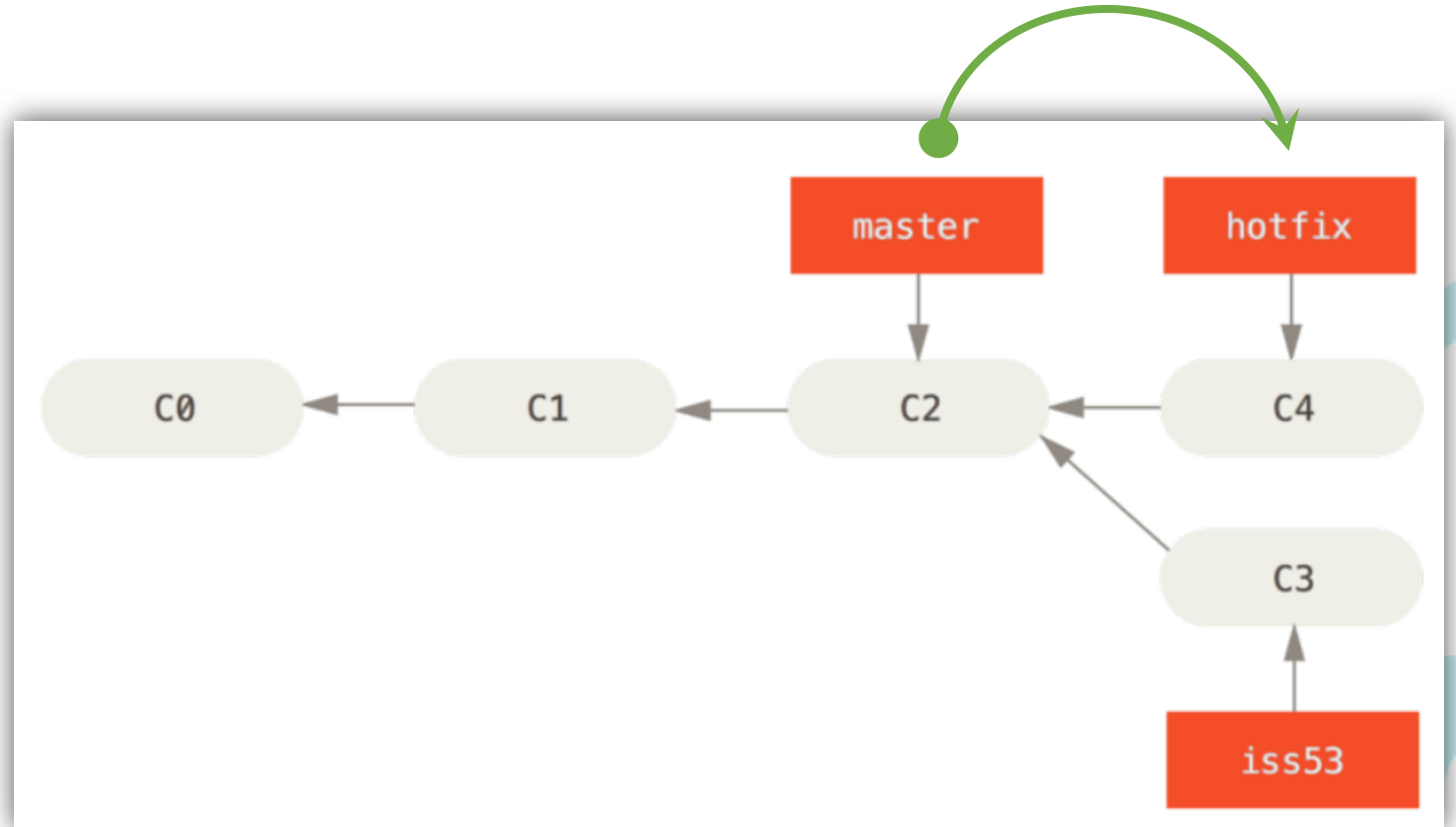


# 3. Teamwork and OPEN SCIENCE

## Merge

- Merge branches

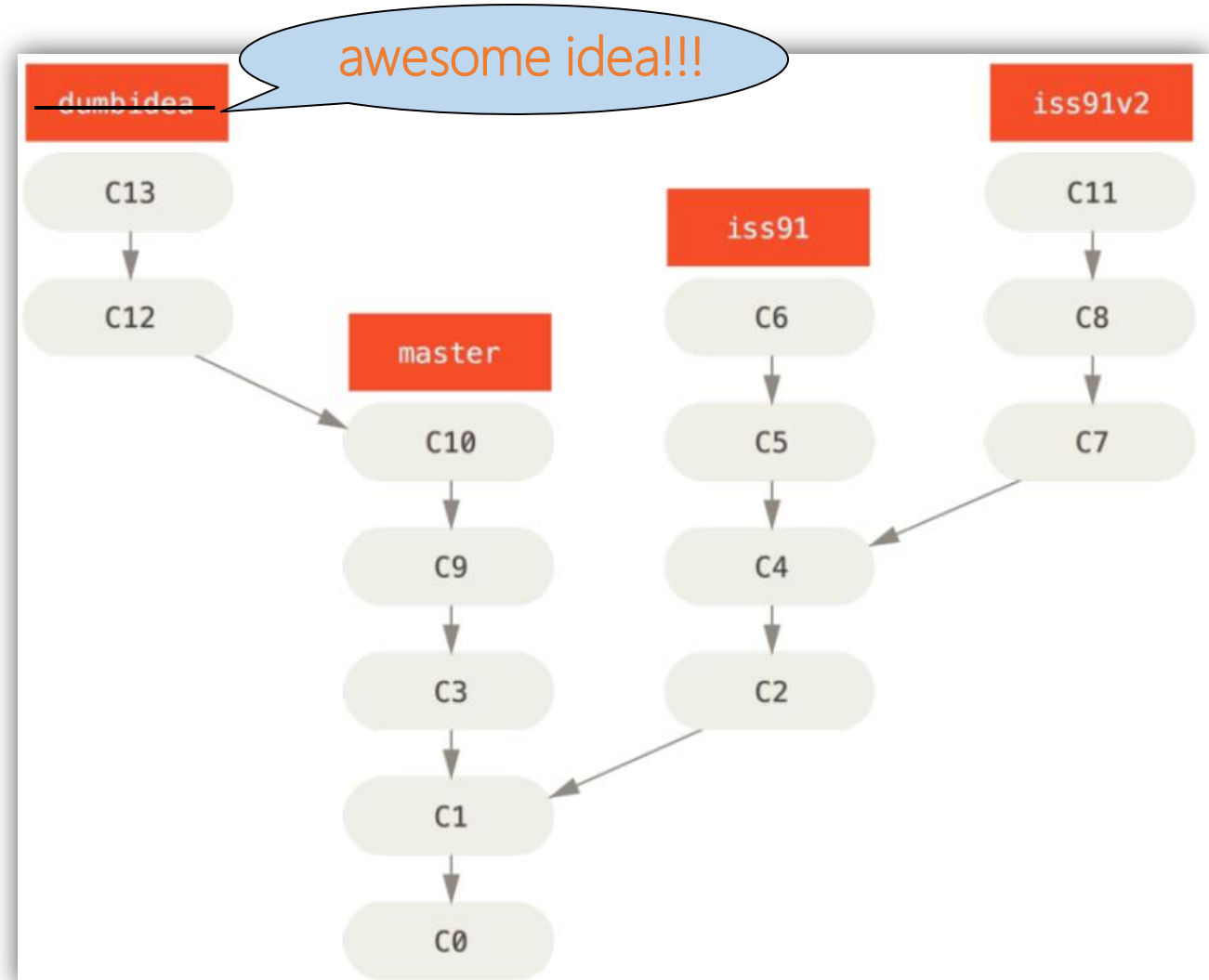
```
$ git checkout master  
$ git merge hotfix
```



### 3. Teamwork and OPEN SCIENCE

# The project can be complicated!

## Keep things simple and merge in time!



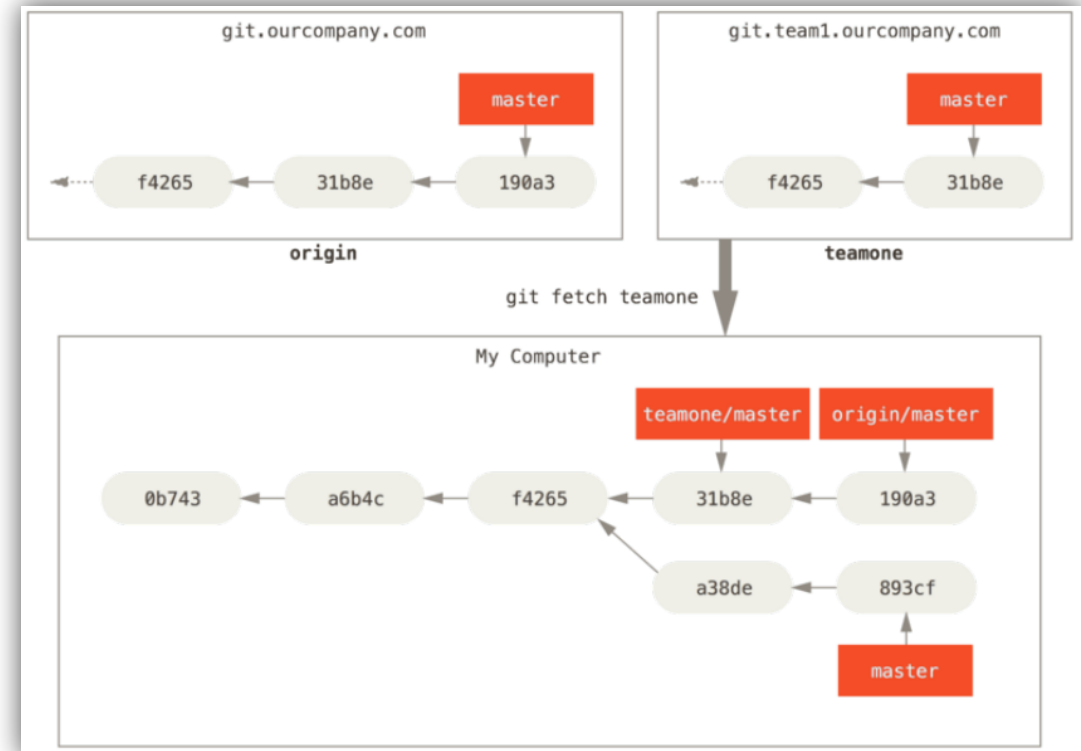
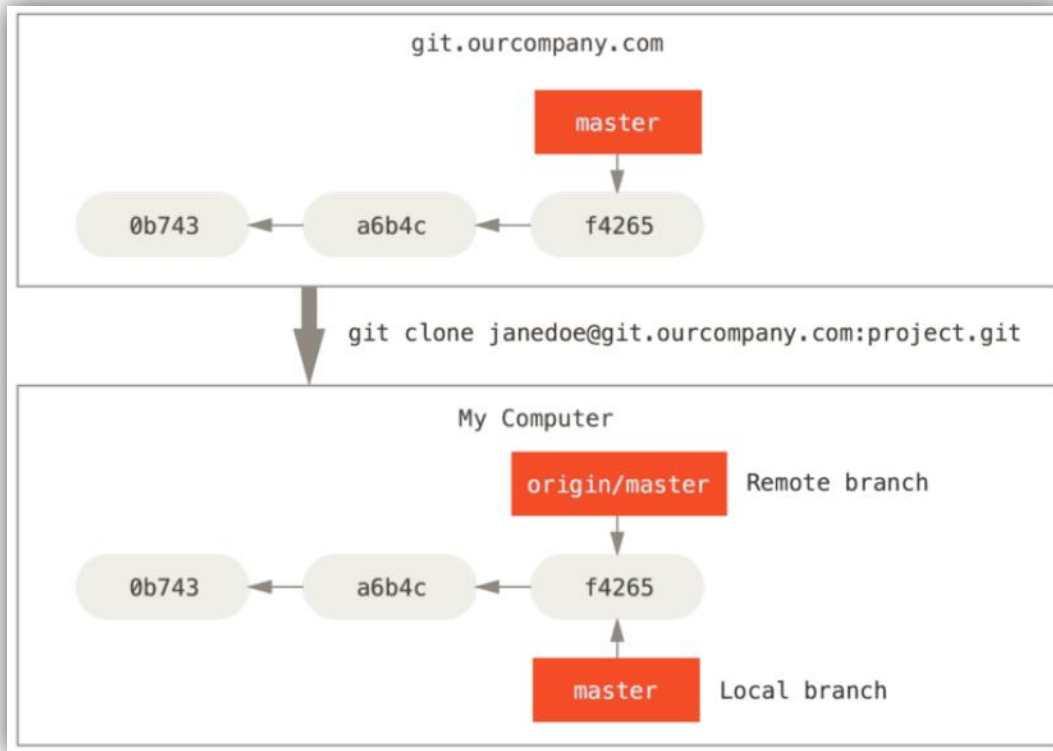
# 3. Teamwork and OPEN SCIENCE

## Working with both local and GitHub repo

```
$ git ls-remote
```

```
$ git pull
```

```
$ git push origin master
```





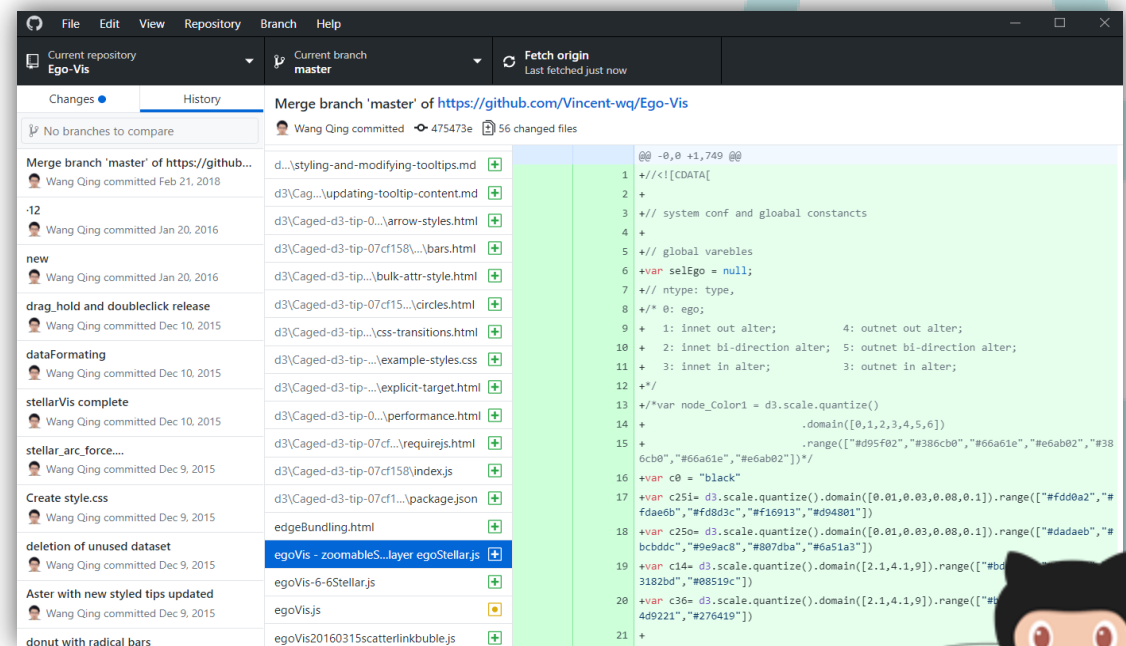
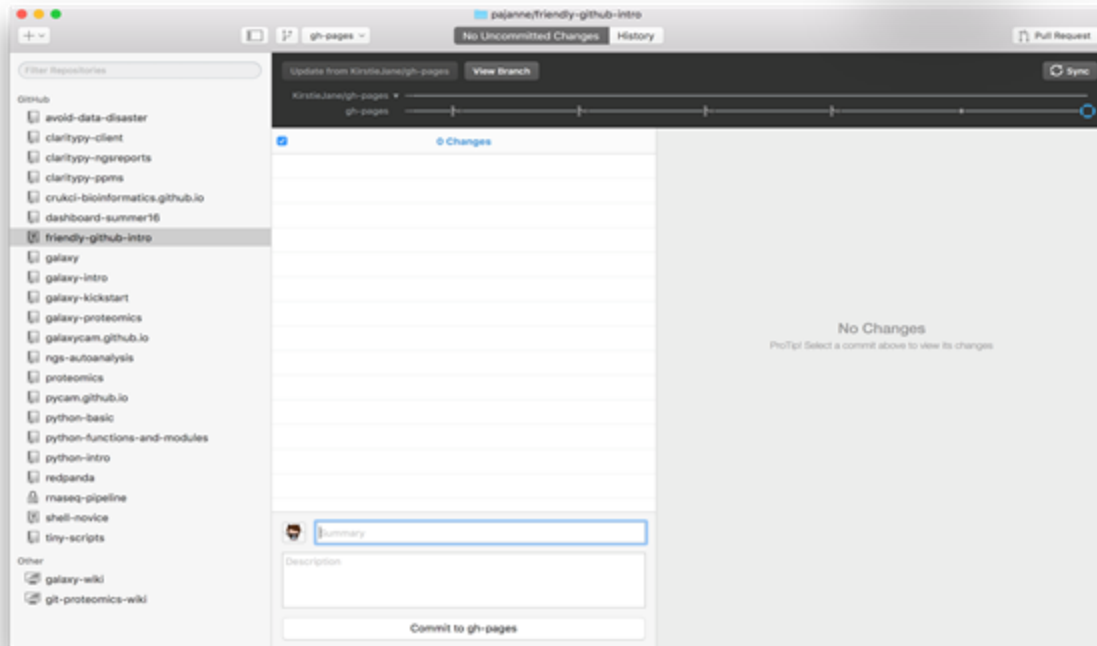
# 3. Teamwork and OPEN SCIENCE

Do not worry, you have got GUIs...



```
MINGW64:/e/00SVN/GitHub-Test1

Vincent@Vincent-Studio MINGW64 /e/00SVN/GitHub-Test1
$ |
```



# 4. More resources

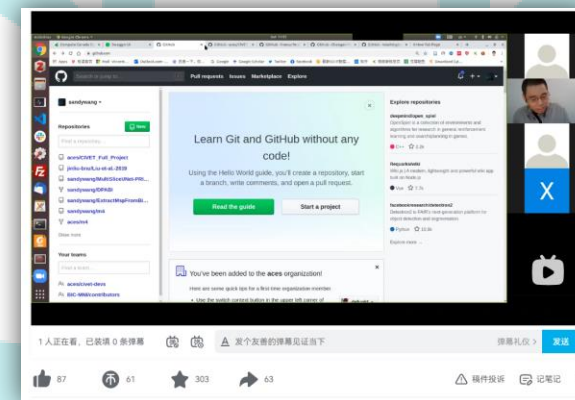
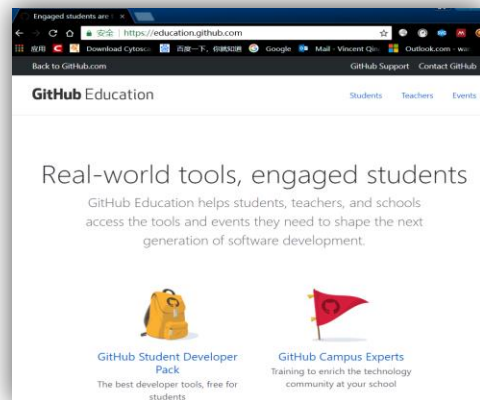
<https://github.com/adam-p/markdown-here/wiki/Markdown-Cheatsheet>

<https://www.webpagefx.com/tools/emoji-cheat-sheet>

[ChooseALicense.com](https://ChooseALicense.com)

<https://creativecommons.org/>

[https://www.bilibili.com/video/BV1T7411U7KK?p=7&vd\\_source=7cbe18ffbd3618fdddcc352d0ea14a53](https://www.bilibili.com/video/BV1T7411U7KK?p=7&vd_source=7cbe18ffbd3618fdddcc352d0ea14a53)



<https://git-scm.com/book/zh/v2>

<https://git-scm.com/doc>

<https://github.com/phodal/github>

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

<https://kirstiejane.github.io/friendly-github-intro/>



Institut-Hôpital  
neurologique de Montréal  
Montreal Neurological  
Institute-Hospital



# Thanks!

*Enjoy your PowerHack!*



Centre universitaire  
de santé McGill

