Introduction to Github/Gitlab

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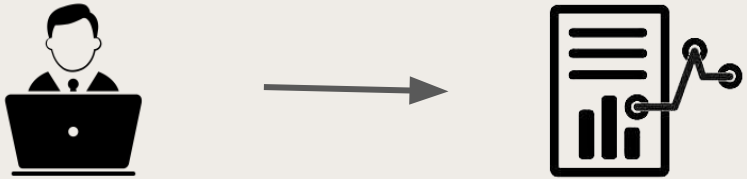
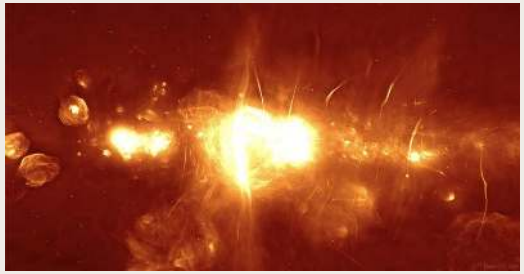
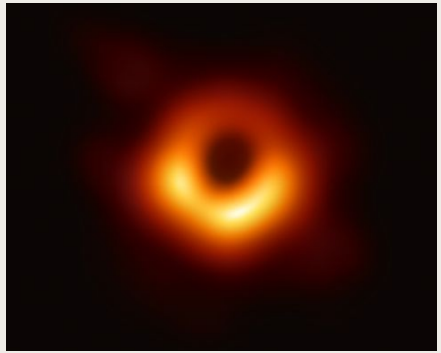
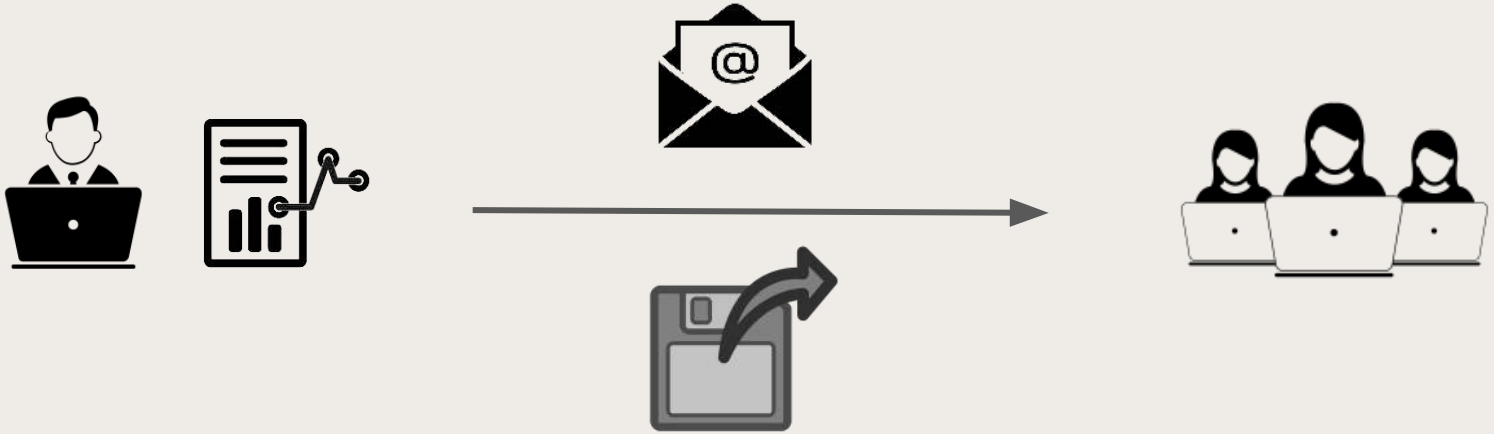
IAA-CSIC (Granada)

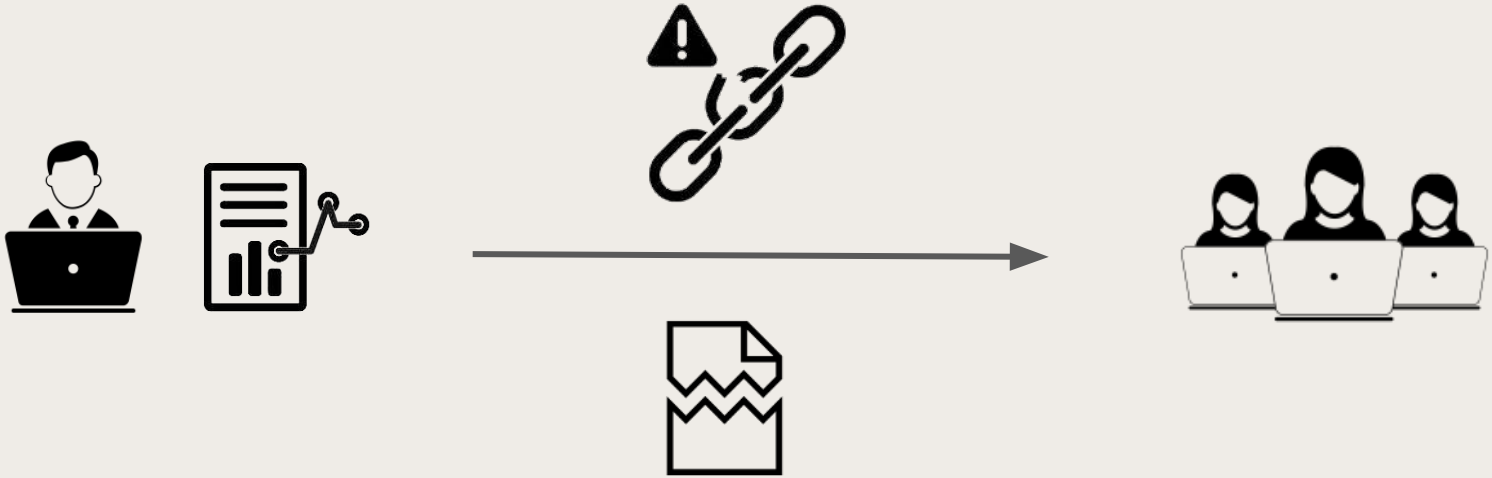
SKA Regional Centre Training Event Series
Hands-on Containerization
January 31, 2022

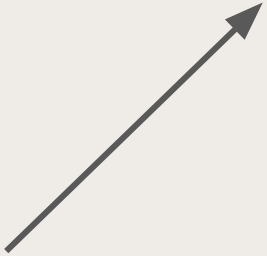


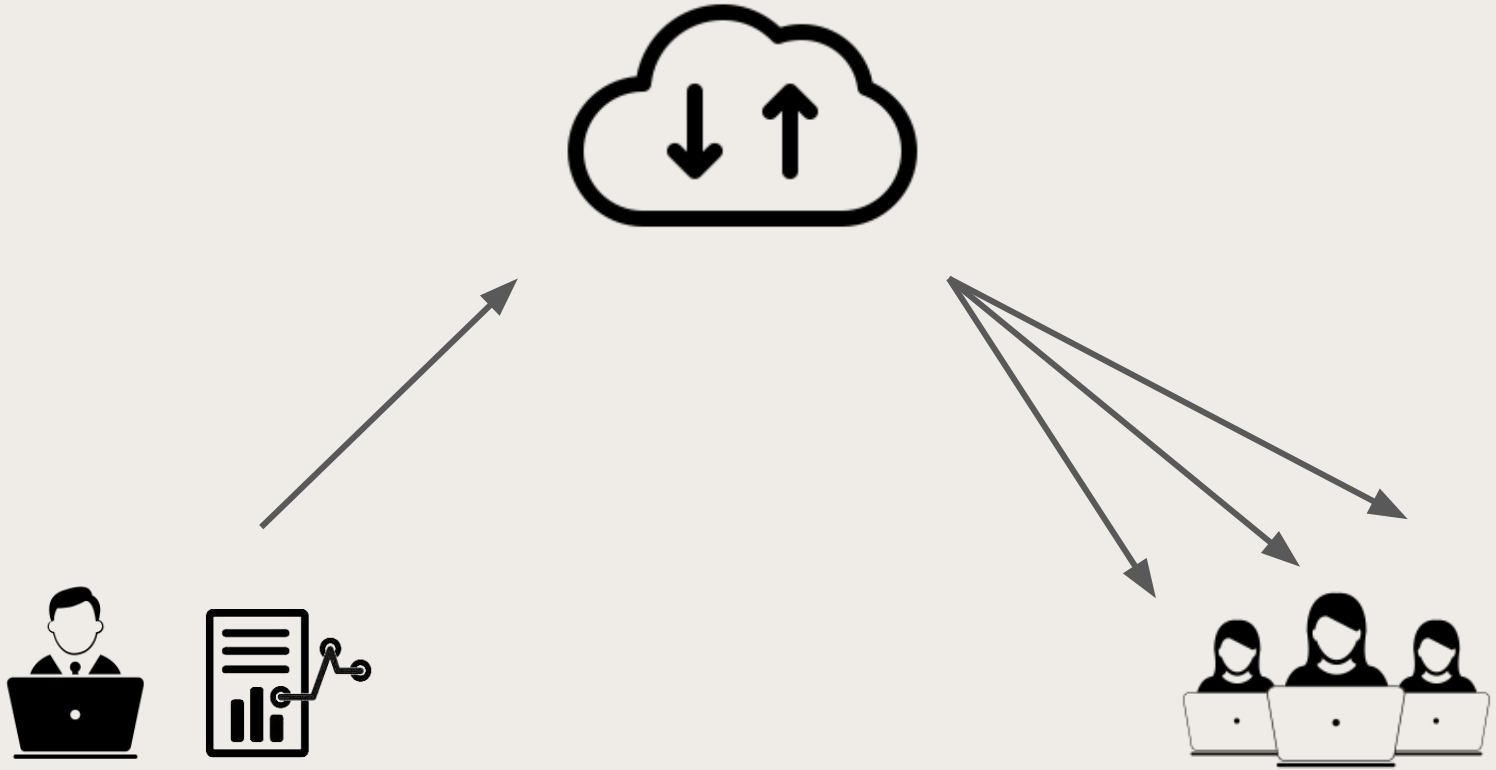


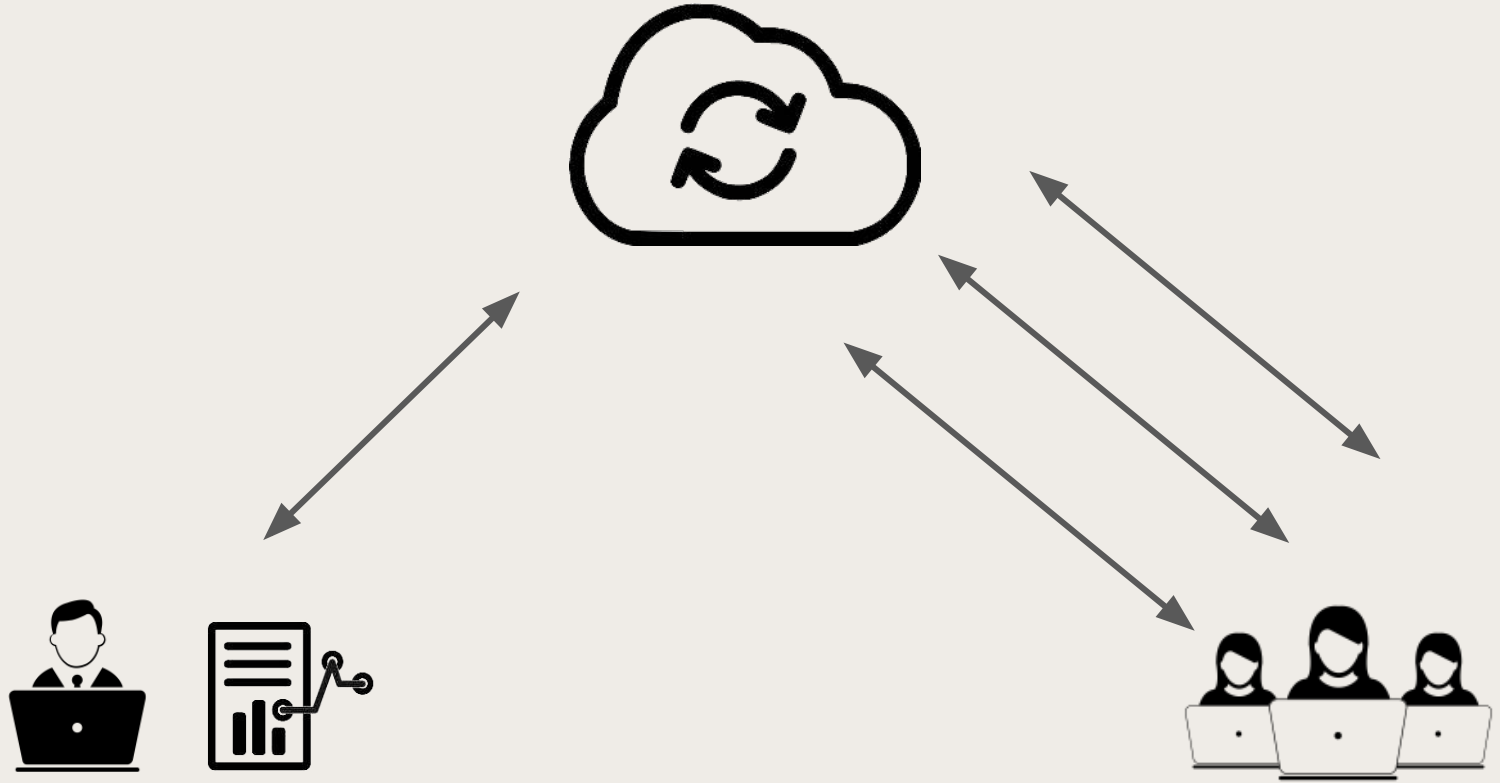












Software repositories

Github

Gitlab

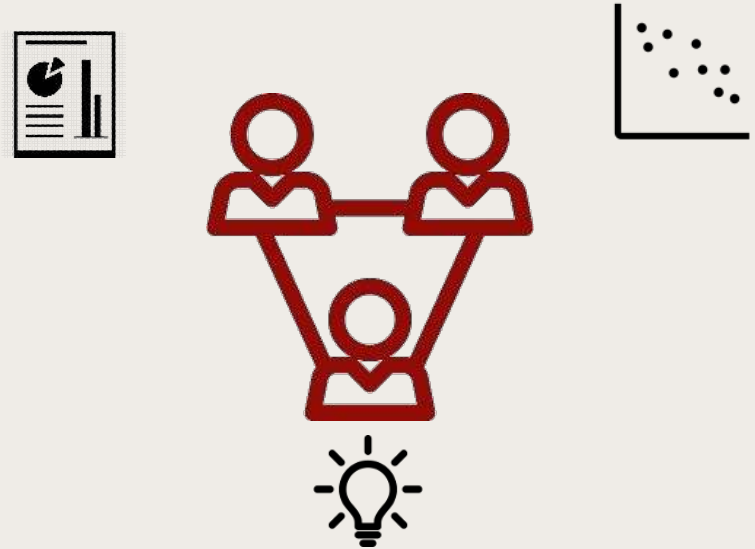
Bitbucket

…

They aim to provide an efficient **collaborative platform**

with powerful **git management** under the hood

and enabling personal or **social coding**



Software repositories

Github

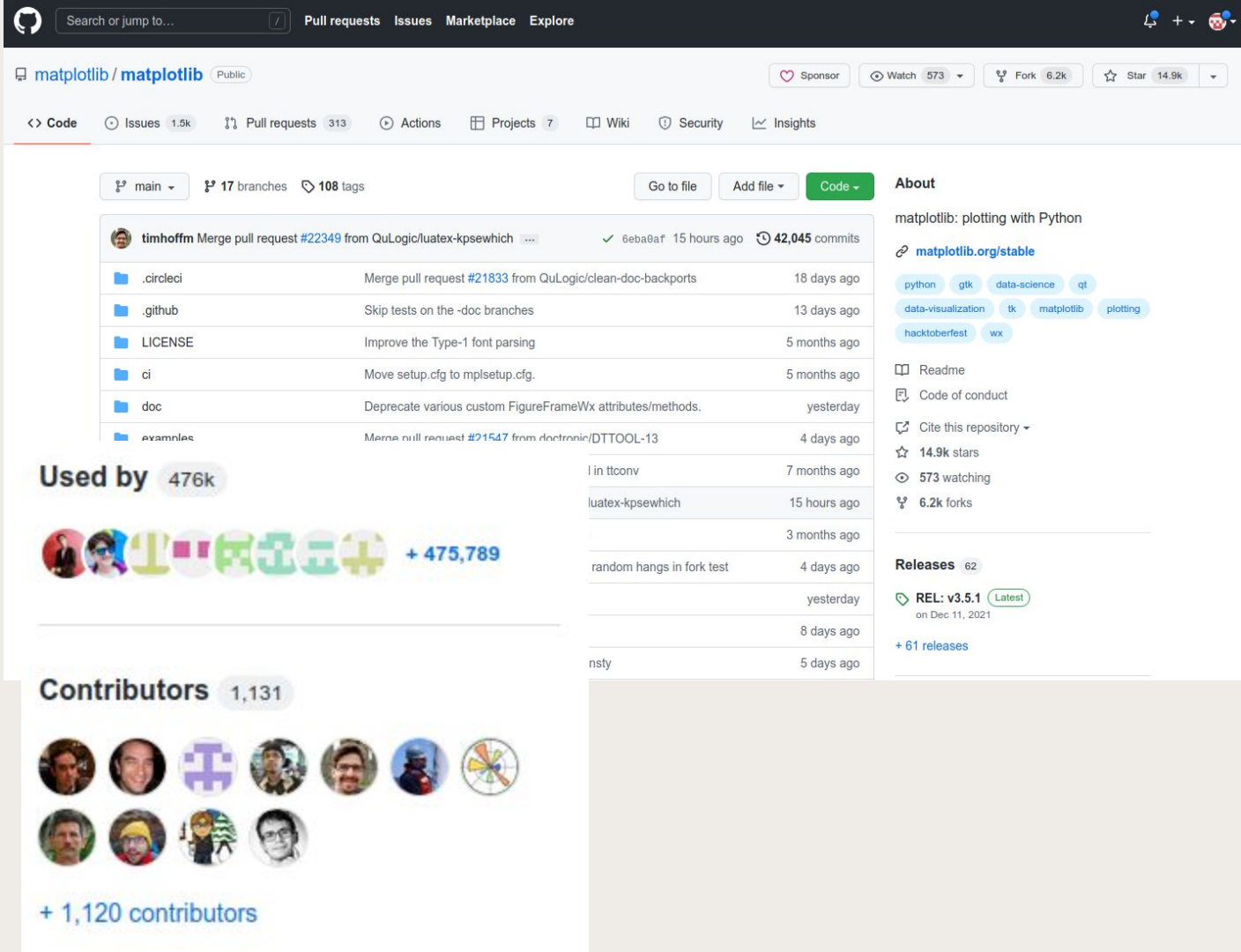
- Now from Microsoft
- 40 million users
- 69.000.000+ repos
- More user friendly
- More limited CI integration, need third party

Gitlab

- Open Source
- 100,000 users
- 500.000+ repos
- More complex
- CI (continuous integration) and a DevOps workflow

Highly scalable

You can use it to version control a single file or…



Basic ingredients

jmoldon / test Private

YOU AND YOUR REPOSITORY

Unwatch 1 | Star 0 | Fork 0

Code | Issues 0 | Pull requests 0 | Actions | Projects 0 | Wiki | Security | Insights | Settings

This project is to share files with my collaborator

YOUR DESCRIPTION

Edit

Manage topics

1 commit | 1 branch | 0 packages | 0 releases | 1 contributor | GPL-3.0

Branch: master | New pull request | Create new file | Upload files | Find file | Clone or download

jmoldon Initial commit — Latest commit d3d166a 3 minutes ago

.gitignore	Initial commit	3 minutes ago
LICENSE	Initial commit	3 minutes ago
README.md	Initial commit	3 minutes ago

YOUR FILES

README.md

test

test

YOUR README

README

[Example README editor]

First thing a visitor sees

Describe what is this, for who and why

Describe the structure or add links to relevant files

Include instructions

Project information

Markdown language

Useful and efficient syntax

For .md files, issues, pull requests, etc.

droplets / sessions / droplets-02-conda / droplets-02-conda.md in master Cancel changes

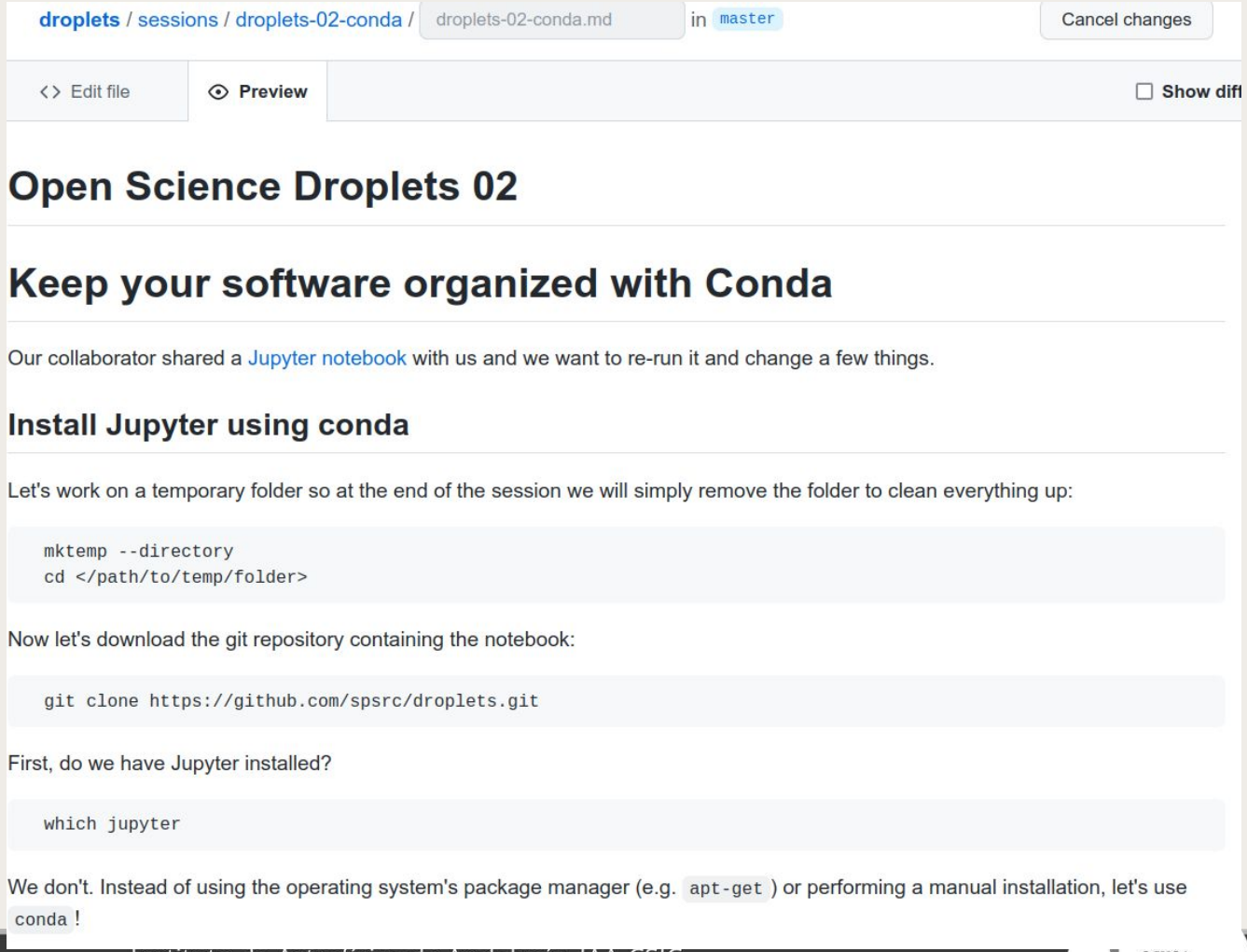
Edit file | Preview | Spaces | 1 | Soft wrap

```
1  # Open Science Droplets 02
2  # Keep your software organized with Conda
3
4  Our collaborator shared a [Jupyter notebook](https://github.com/spsrc/droplets/blob/master/gaia_exploratory
   /jupyter_exploratory.ipynb) with us
5  and we want to re-run it and change a few things.
6
7  ## Install Jupyter using conda
8  Let's work on a temporary folder so at the end of the session we will simply remove the folder to clean everything up:
9  ```
10  mktemp --directory
11  cd </path/to/temp/folder>
12 ```
13
14 Now let's download the git repository containing the notebook:
15 ```
16  git clone https://github.com/spsrc/droplets.git
17 ```
18
19 First, do we have Jupyter installed?
20 ```
21  which jupyter
22 ```
23
24 We don't. Instead of using the operating system's package manager (e.g. `apt-get`) or performing a manual installation, let's
   use `conda`!
25 ```
26  curl --output Miniconda.sh https://repo.anaconda.com/miniconda/Miniconda3-latest-Linux-x86_64.sh
27  bash Miniconda.sh -b -p conda-install
28  source conda-install/etc/profile.d/conda.sh
29  conda install mamba --channel conda-forge --yes
30 ```
31
```

Markdown language

Useful and efficient syntax

For .md files, issues, pull requests, etc.



droplets / sessions / droplets-02-conda / droplets-02-conda.md in master

Cancel changes

Edit file | Preview | Show diff

Open Science Droplets 02

Keep your software organized with Conda

Our collaborator shared a Jupyter notebook with us and we want to re-run it and change a few things.

Install Jupyter using conda

Let's work on a temporary folder so at the end of the session we will simply remove the folder to clean everything up:

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mktemp --directory
cd </path/to/temp/folder>
```

Now let's download the git repository containing the notebook:

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git clone https://github.com/spsrc/droplets.git
```
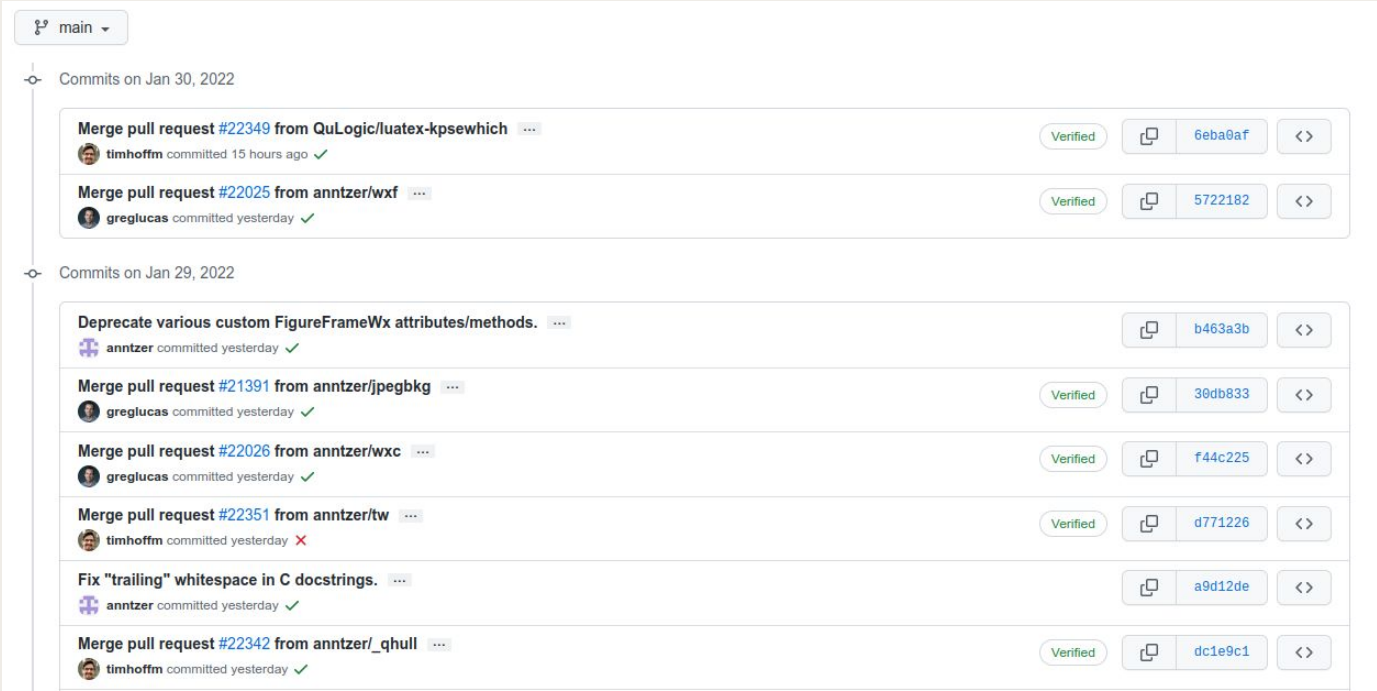

First, do we have Jupyter installed?

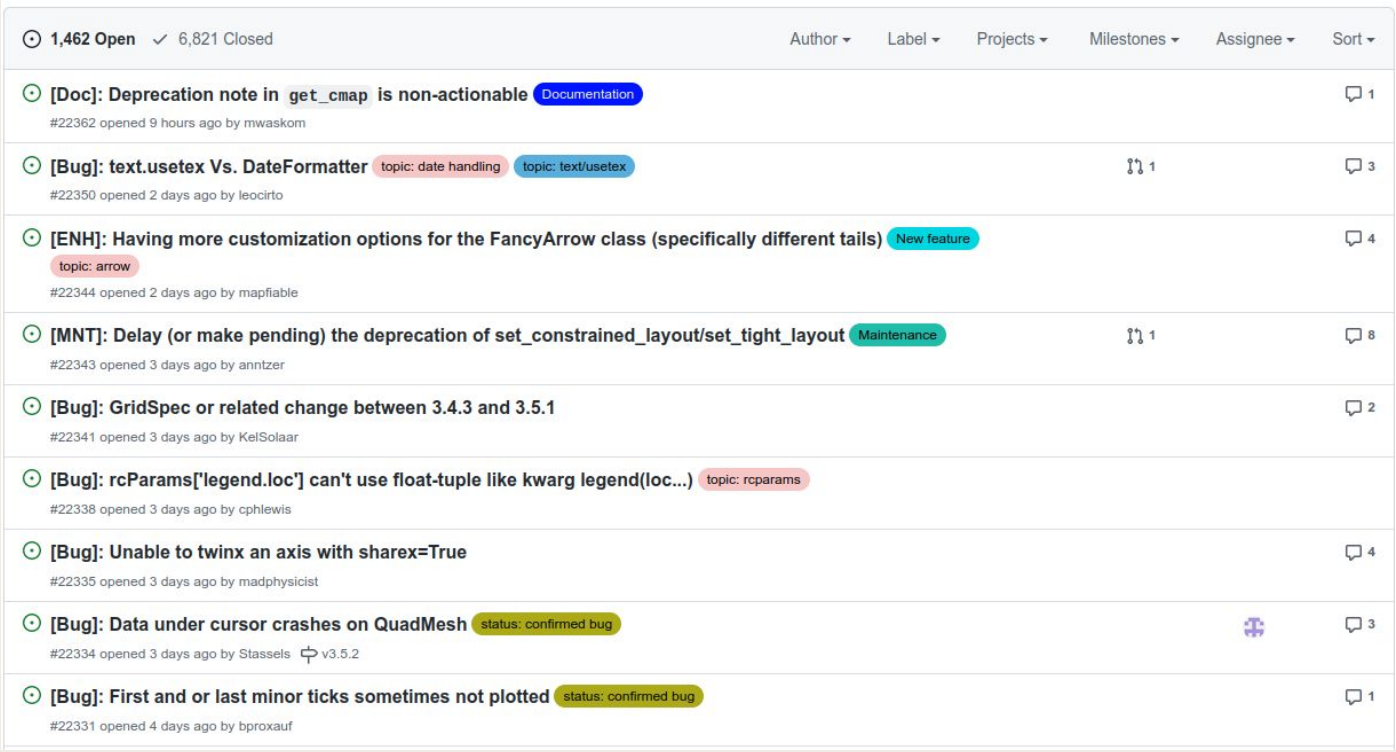
```
which jupyter
```

We don't. Instead of using the operating system's package manager (e.g. `apt-get`) or performing a manual installation, let's use `conda`!

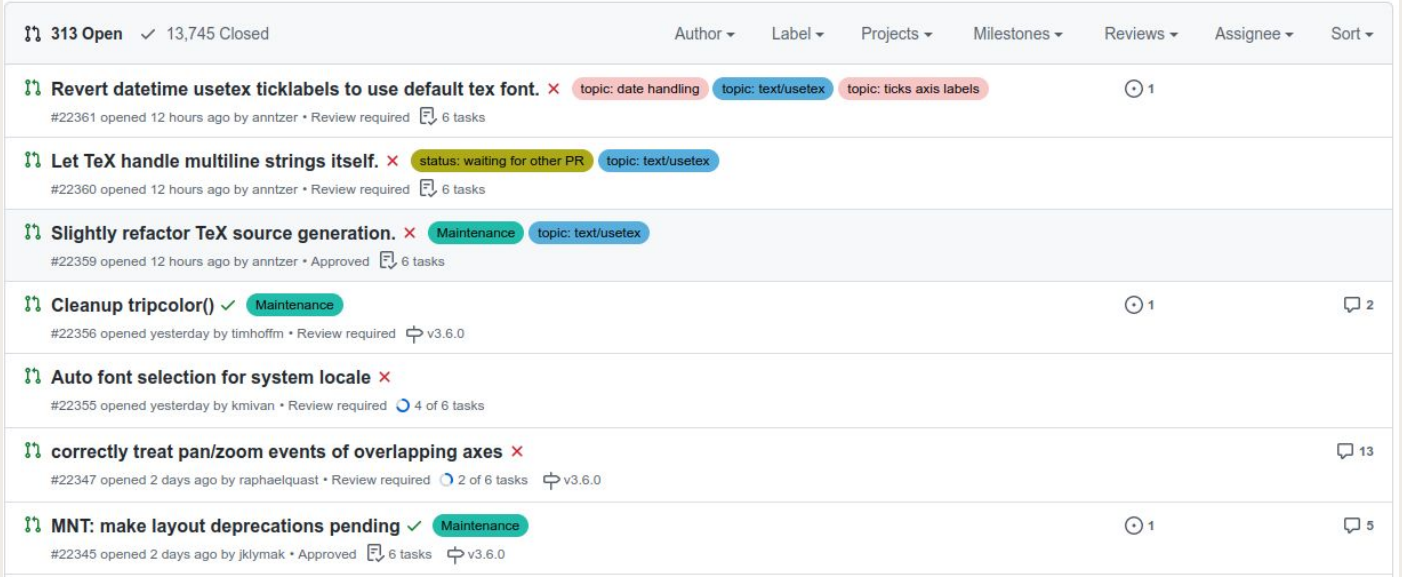
Commit history



Issues


1,462 Open
6,821 Closed
Author
Label
Projects
Milestones
Assignee
Sort
[Doc]: Deprecation note in get_cmap is non-actionable
Documentation
#22362 opened 9 hours ago by mwaskom
1
[Bug]: text.usetex Vs. DateFormatter
topic: date handling
topic: text/usetex
#22350 opened 2 days ago by leocirto
1
3
[ENH]: Having more customization options for the FancyArrow class (specifically different tails)
New feature
topic: arrow
#22344 opened 2 days ago by mapfiable
4
[MNT]: Delay (or make pending) the deprecation of set_constrained_layout/set_tight_layout
Maintenance
#22343 opened 3 days ago by anntzer
1
8
[Bug]: GridSpec or related change between 3.4.3 and 3.5.1
#22341 opened 3 days ago by KelSolaar
2
[Bug]: rcParams['legend.loc'] can't use float-tuple like kwarg legend(loc...)
topic: rcparams
#22338 opened 3 days ago by cphlewis
[Bug]: Unable to twinx an axis with sharex=True
#22335 opened 3 days ago by madphysicist
4
[Bug]: Data under cursor crashes on QuadMesh
status: confirmed bug
#22334 opened 3 days ago by Stassels
v3.5.2
3
[Bug]: First and or last minor ticks sometimes not plotted
status: confirmed bug
#22331 opened 4 days ago by bproxauf
1

Pull/Merge requests



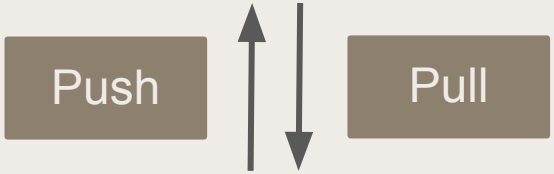
Clone vs Fork

A/myrepo

B/myrepo

A

A/myrepo



A

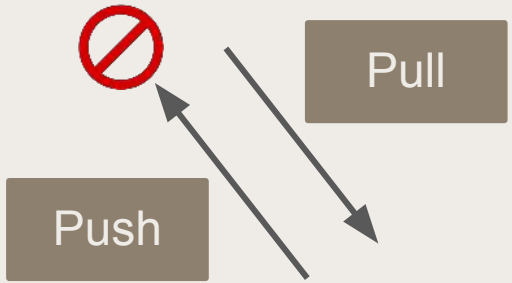
A/myrepo

Clone

A

B

A/myrepo

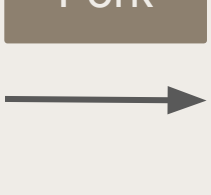


A

B

A/myrepo

Fork



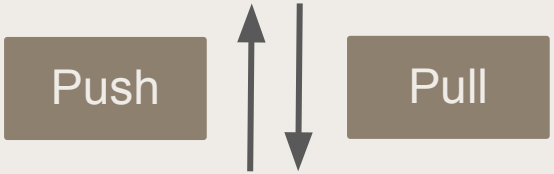
B/myrepo

A

B

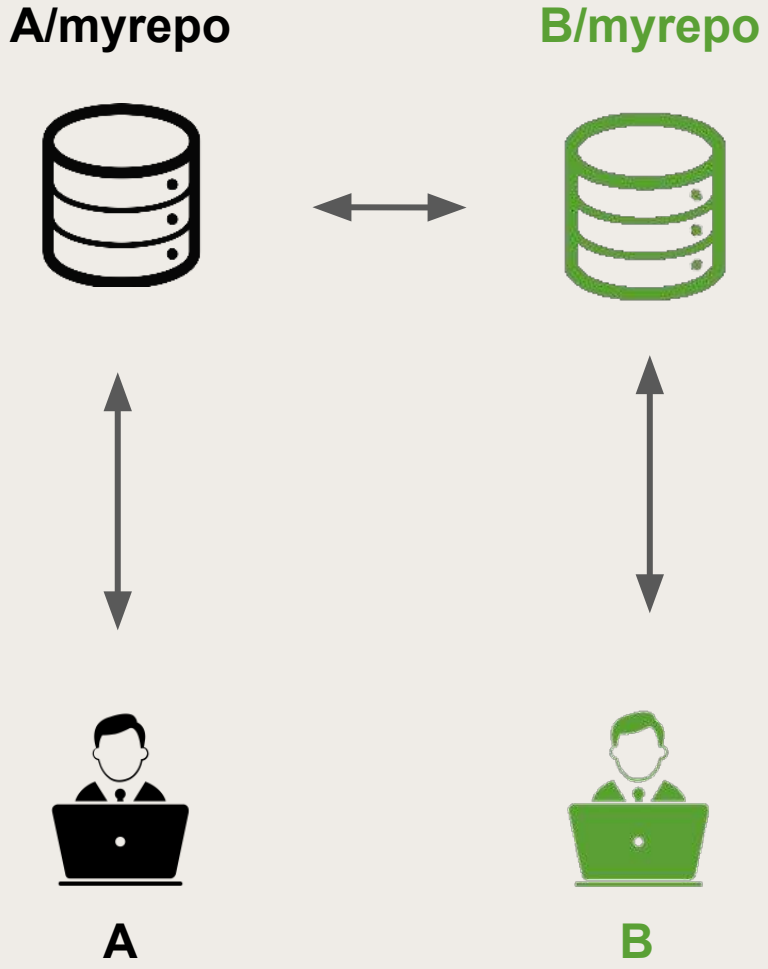
A/myrepo

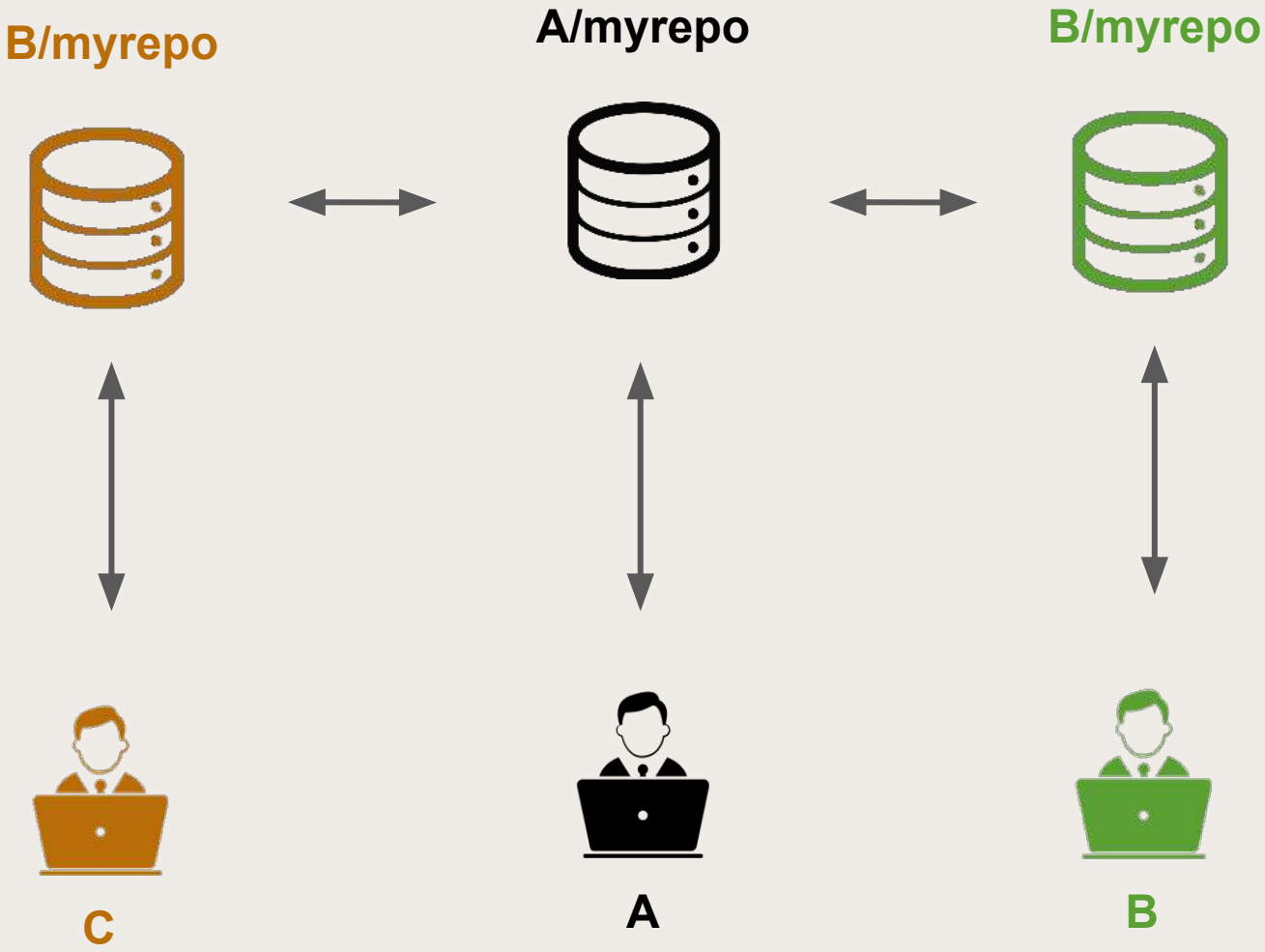
B/myrepo



A

B

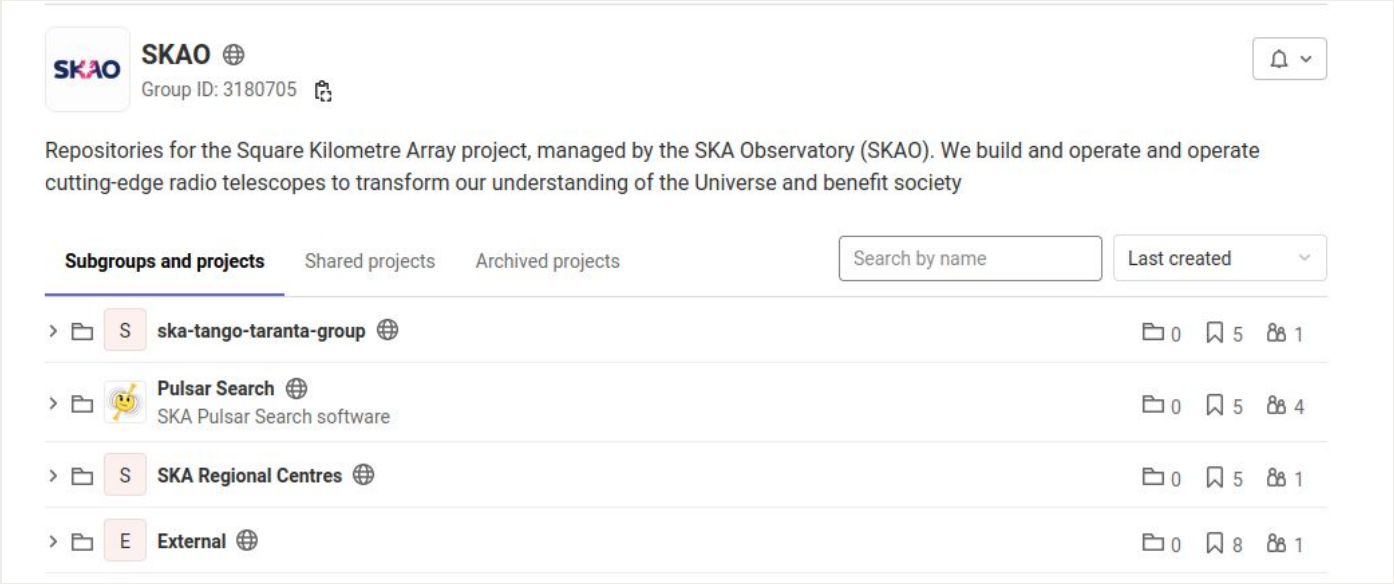

A/myrepo
B/myrepo
A
B


B/myrepo
A/myrepo
B/myrepo
C
A
B

Additional considerations

Organizations

A way to centralize the management and repo ownership

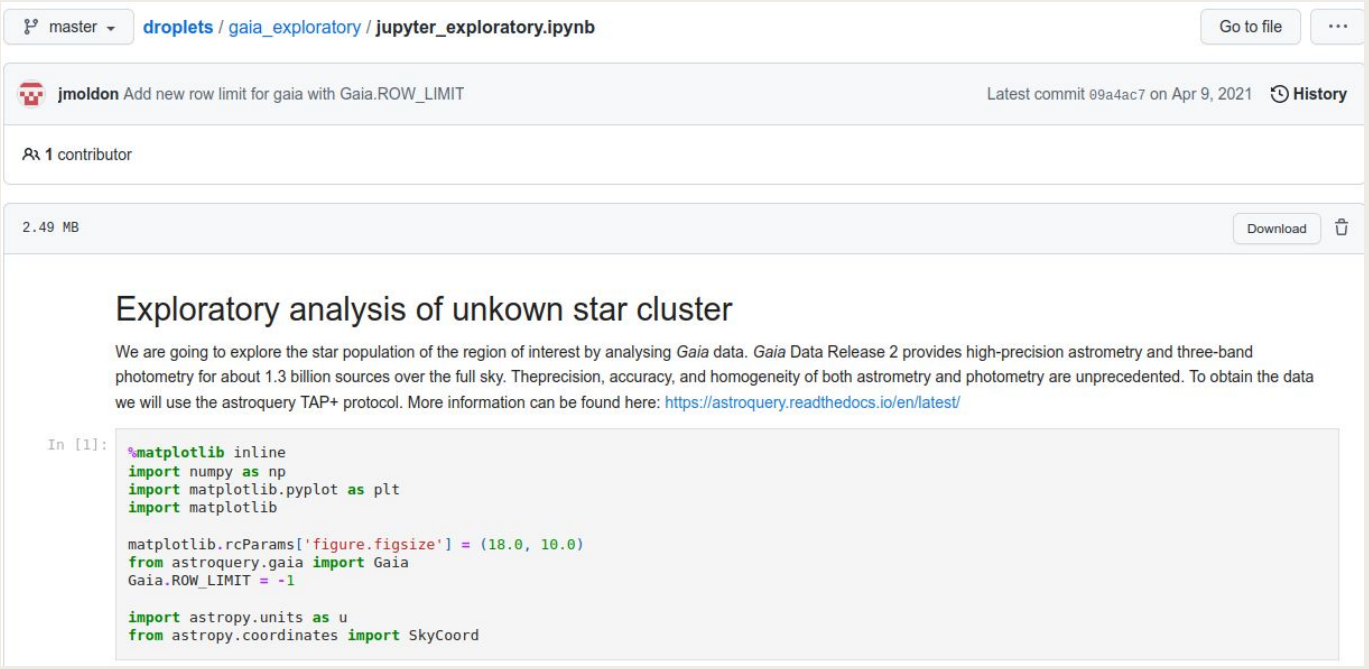


Automatic rendering of files

Jupyter notebooks

csv

markdown



Repository visibility

Public

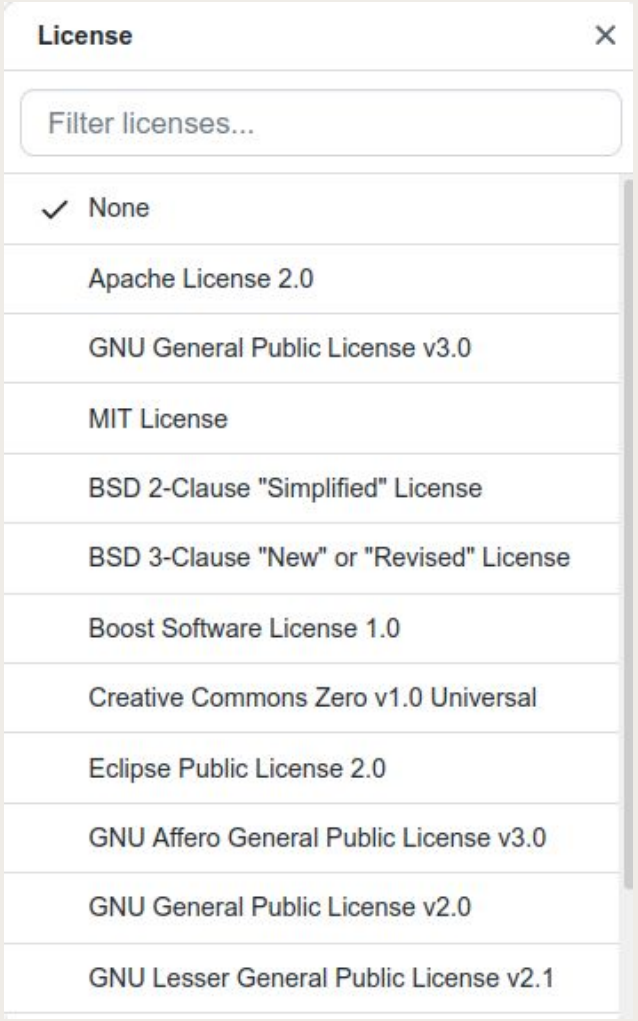
Private

LICENSE

Choose here

If in doubt:

GNU General Public License v3.0



.gitignore

Avoid storing not needed files in your repo

main ▾ **matplotlib / .gitignore**

QuLogic Remove generated file accidentally added in #20867

21 contributors +9

112 lines (99 sloc) | 1.74 KB

```
1  ########################################
2  # OS-specific temporary and backup files
3  .DS_Store
4
5  ########################################
6  # Editor temporary/working/backup files #
7  .#*
8  [#]*#
9  *~
10 *$
11 *.bak
12 *.kdev4
13 .project
14 .pydevproject
15 *.swp
16 .idea
17 .vscode/
18
```

It’s all about collaborating

Enjoy!