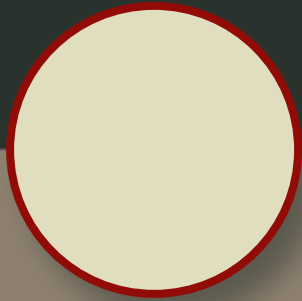


# Introduction to Github/Gitlab



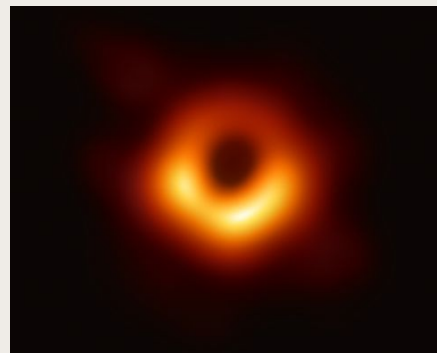
Javier Moldón

IAA-CSIC (Granada)

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

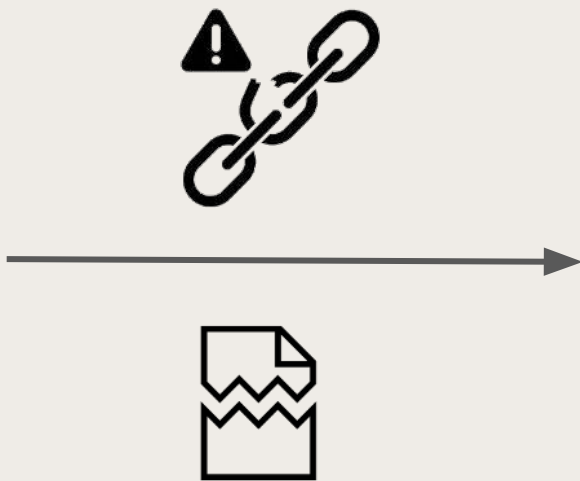


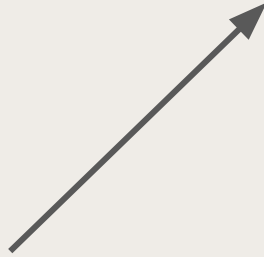




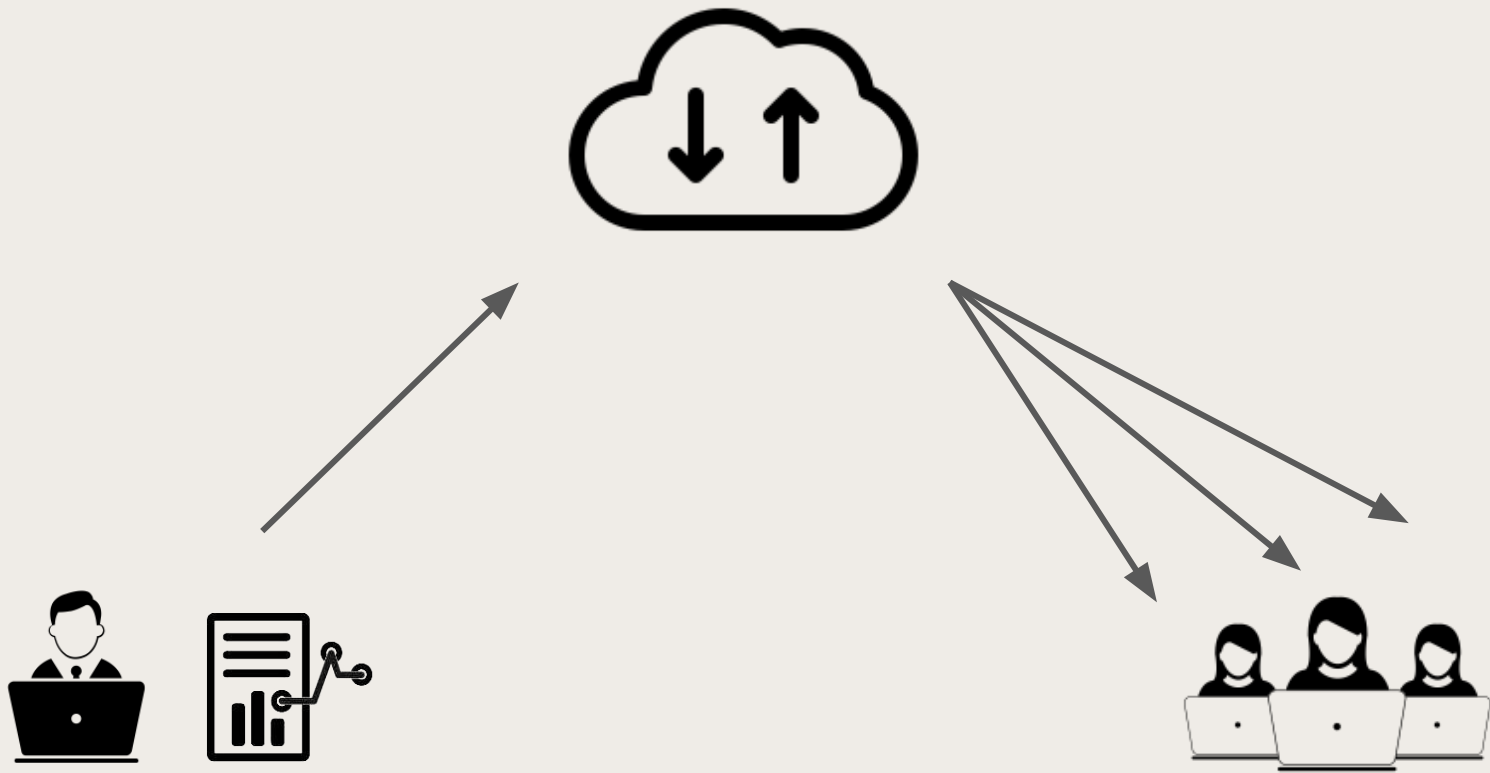


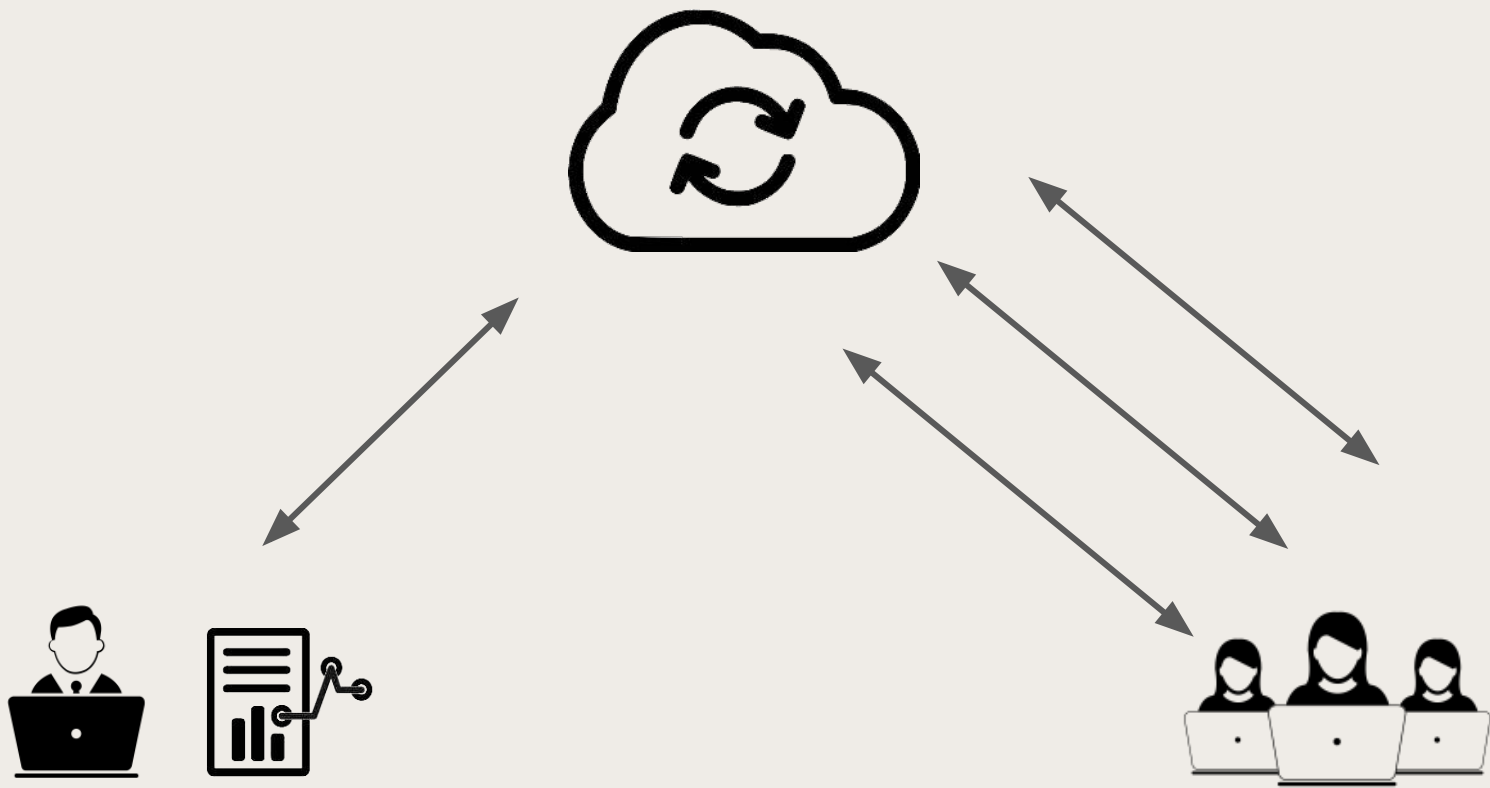












# Software repositories

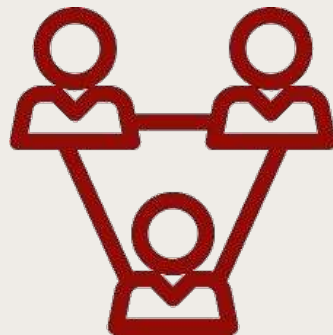
Github

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...

Search or jump to... Pull requests Issues Marketplace Explore

matplotlib / matplotlib Public

Sponsor Watch 573 Fork 6.2k Star 14.9k

<> Code Issues 1.5k Pull requests 313 Actions Projects 7 Wiki Security Insights

main 17 branches 108 tags Go to file Add file Code

timhoffm Merge pull request #22349 from QuLogic/luatex-kpsewhich 6eba9af 15 hours ago 42,045 commits

.circleci	Merge pull request #21833 from QuLogic/clean-doc-backports	18 days ago
.github	Skip tests on the -doc branches	13 days ago
LICENSE	Improve the Type-1 font parsing	5 months ago
ci	Move setup.cfg to mplsetup.cfg.	5 months ago
doc	Deprecate various custom FigureFrameWx attributes/methods.	yesterday
examples	Merge pull request #21547 from electronic/DTTOOL-13	4 days ago

Used by 476k

l in ttconv 7 months ago  
luatex-kpsewhich 15 hours ago  
random hangs in fork test 4 days ago  
yesterday  
8 days ago  
nsty 5 days ago

Contributors 1,131

+ 475,789  
+ 1,120 contributors

About matplotlib: plotting with Python

matplotlib.org/stable

python gtk data-science qt data-visualization tk matplotlib plotting hacktoberfest wx

Readme Code of conduct Cite this repository 14.9k stars 573 watching 6.2k forks

Releases 62 REL: v3.5.1 Latest on Dec 11, 2021 + 61 releases

Basic ingredients

<> 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

YOUR README

test

# 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
5 /jupyter_exploratory.ipynb) with us
6 and we want to re-run it and change a few things.
7
8 ## Install Jupyter using conda
9 Let's work on a temporary folder so at the end of the session we will simply remove the folder to clean everything up:
10 ```
11 mktemp --directory
12 cd </path/to/temp/folder>
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
25 use `conda`!
26 ```
27 curl --output Miniconda.sh https://repo.anaconda.com/miniconda/Miniconda3-latest-Linux-x86_64.sh
28 bash Miniconda.sh -b -p conda-install
29 source conda-install/etc/profile.d/conda.sh
30 conda install mamba --channel conda-forge --yes
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:

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

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

```
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

main

Commits on Jan 30, 2022

- Merge pull request #22349 from QuLogic/luatex-kpsewhich ...  
timhoffm committed 15 hours ago ✓  
Verified [6eba0af](#) <>
- Merge pull request #22025 from anntzer/wxf ...  
greglucas committed yesterday ✓  
Verified [5722182](#) <>








Commits on Jan 29, 2022

- Deprecate various custom FigureFrameWx attributes/methods. ...  
anntzer committed yesterday ✓  
[b463a3b](#) <>
- Merge pull request #21391 from anntzer/jpegbkg ...  
greglucas committed yesterday ✓  
Verified [39db833](#) <>
- Merge pull request #22026 from anntzer/wxc ...  
greglucas committed yesterday ✓  
Verified [f44c225](#) <>
- Merge pull request #22351 from anntzer/tw ...  
timhoffm committed yesterday ✗  
Verified [d771226](#) <>
- Fix "trailing" whitespace in C docstrings. ...  
anntzer committed yesterday ✓  
[a9d12de](#) <>
- Merge pull request #22342 from anntzer/\_qhull ...  
timhoffm committed yesterday ✓  
Verified [dc1e9c1](#) <>

# Issues

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

# Pull/Merge requests

313 Open ✓ 13,745 Closed		Author ▾	Label ▾	Projects ▾	Milestones ▾	Reviews ▾	Assignee ▾	Sort ▾
	<b>Revert datetime usetex ticklabels to use default tex font.</b> ✗	topic: date handling	topic: text/usetex	topic: ticks axis labels		1		
#22361 opened 12 hours ago by annntzer • Review required 6 tasks								
	<b>Let TeX handle multiline strings itself.</b> ✗	status: waiting for other PR	topic: text/usetex					
#22360 opened 12 hours ago by annntzer • Review required 6 tasks								
	<b>Slightly refactor TeX source generation.</b> ✗	Maintenance	topic: text/usetex					
#22359 opened 12 hours ago by annntzer • Approved 6 tasks								
	<b>Cleanup tripcolor()</b> ✓	Maintenance				1		2
#22356 opened yesterday by timhoffm • Review required v3.6.0								
	<b>Auto font selection for system locale</b> ✗							
#22355 opened yesterday by kmivan • Review required 4 of 6 tasks								
	<b>correctly treat pan/zoom events of overlapping axes</b> ✗							13
#22347 opened 2 days ago by raphaelquast • Review required 2 of 6 tasks v3.6.0								
	<b>MNT: make layout deprecations pending</b> ✓	Maintenance				1		5
#22345 opened 2 days ago by jklymak • Approved 6 tasks v3.6.0								

## Clone vs Fork



A/myrepo

B/myrepo



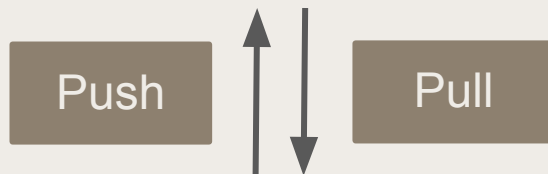
Clone



A



A/myrepo

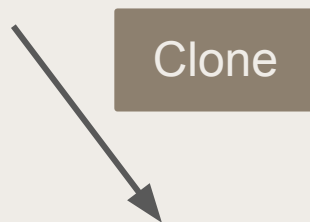


A





A/myrepo



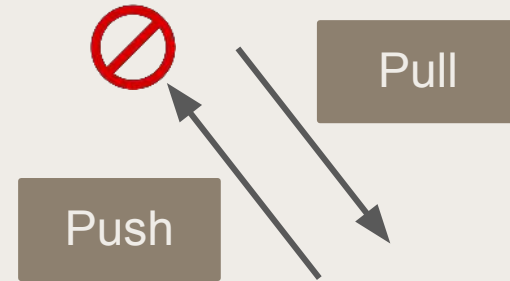
A



B



A/myrepo



A



B



A/myrepo



Fork



B/myrepo



A



B



A/myrepo



B/myrepo



Push



Pull



A



B



A/myrepo



B/myrepo

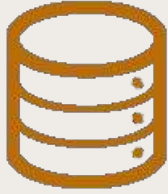


A



B

B/myrepo



A/myrepo



B/myrepo



C



A








B

Additional considerations

# Organizations




A way to  
centralize the  
management and  
repo ownership

**SKAO**   
Group ID: 3180705 




 

Repositories for the Square Kilometre Array project, managed by the SKA Observatory (SKAO). We build and operate and operate cutting-edge radio telescopes to transform our understanding of the Universe and benefit society




**Subgroups and projects**   Shared projects   Archived projects

>   **ska-tango-taranta-group** 




0 5 1

>   **Pulsar Search**   
SKA Pulsar Search software

0 5 4

>   **SKA Regional Centres** 

0 5 1

>   **External** 

0 8 1





# Automatic rendering of files


Jupyter notebooks


CSV

markdown

 master ▾ droplets / gaia\_exploratory / jupyter\_exploratory.ipynb Go to file ...

 jmoldon Add new row limit for gaia with Gaia.ROW\_LIMIT Latest commit 09a4ac7 on Apr 9, 2021 History

 1 contributor

2.49 MB Download 

## Exploratory analysis of unknown star cluster

We are going to explore the star population of the region of interest by analysing *Gaia* data. *Gaia* Data Release 2 provides high-precision astrometry and three-band photometry for about 1.3 billion sources over the full sky. The precision, accuracy, and homogeneity of both astrometry and photometry are unprecedented. To obtain the data we will use the astroquery TAP+ protocol. More information can be found here: <https://astroquery.readthedocs.io/en/latest/>

```
In [1]: %matplotlib inline
import numpy as np
import matplotlib.pyplot as plt
import matplotlib

matplotlib.rcParams['figure.figsize'] = (18.0, 10.0)
from astroquery.gaia import Gaia
Gaia.ROW_LIMIT = -1

import astropy.units as u
from astropy.coordinates import SkyCoord
```

# Repository visibility

Public



Private



# LICENSE

Choose [here](#)

If in doubt:

GNU General  
Public License v3.0

License

×

Filter licenses...

✓ None

Apache License 2.0

GNU General Public License v3.0

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BSD 2-Clause "Simplified" License

BSD 3-Clause "New" or "Revised" License

Boost Software License 1.0

Creative Commons Zero v1.0 Universal

Eclipse Public License 2.0

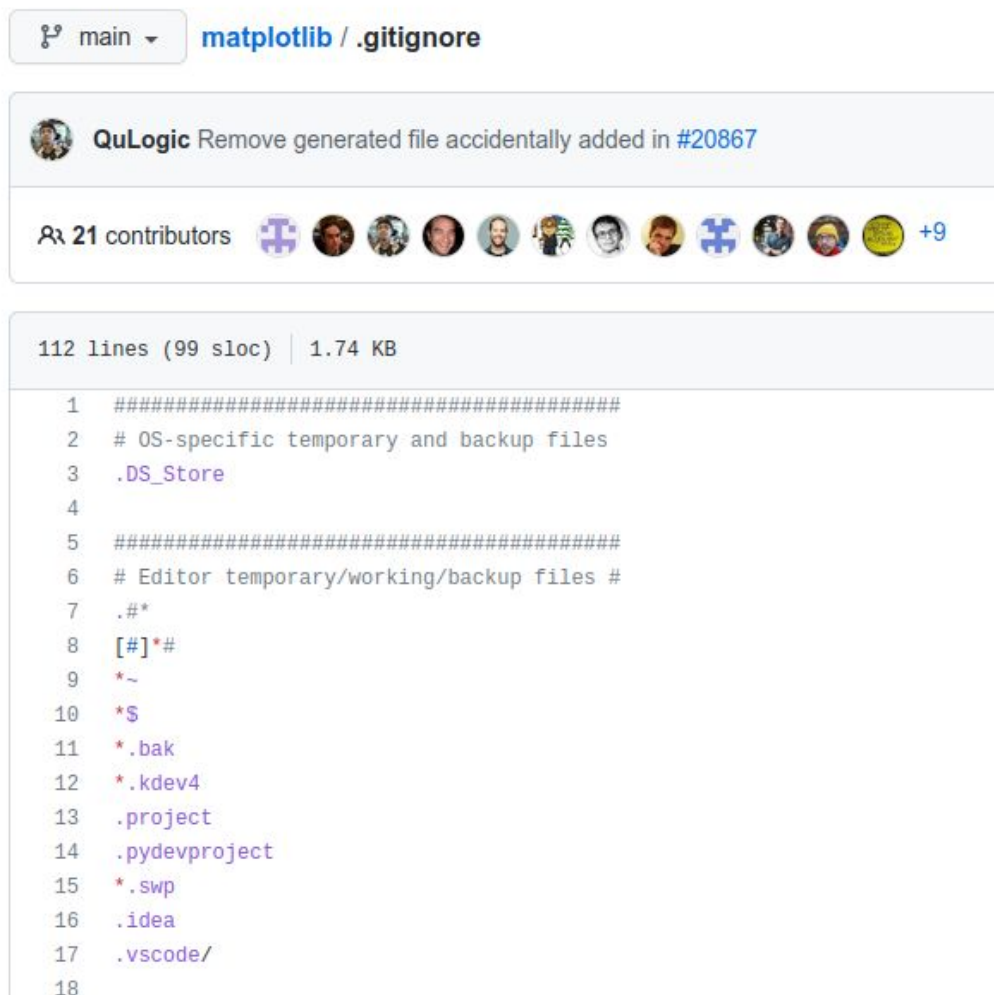
GNU Affero General Public License v3.0

GNU General Public License v2.0

GNU Lesser General Public License v2.1

# .gitignore

Avoid storing not  
needed files in  
your repo



The screenshot shows the GitHub interface for the `matplotlib/.gitignore` file. At the top, it indicates the repository is on the `main` branch. A commit message from **QuLogic** is visible: "Remove generated file accidentally added in #20867". Below this, there are 21 contributors listed with their avatars. The file statistics show 112 lines (99 sloc) and a size of 1.74 KB. The file content is a .gitignore file with the following lines:

```
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!

