

GITHUB & GITHUB ACTIONS

Cloud Computing



INTRODUCTION TO GITHUB



GIT



- Distributed version control system
- Developed by Linus Torvalds in 2005
- Initially used for Linux kernel development

GITHUB

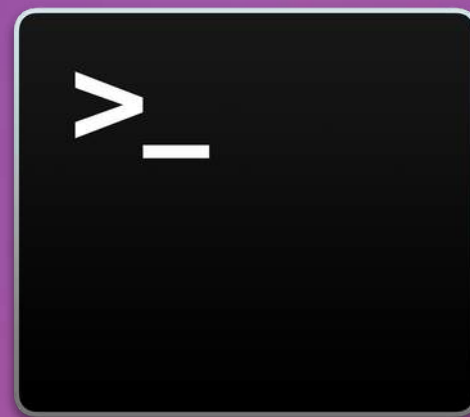


- Version Control
- Repository Hosting
- Collaboration Tools
- Community and Open Source
- Integration and Automation

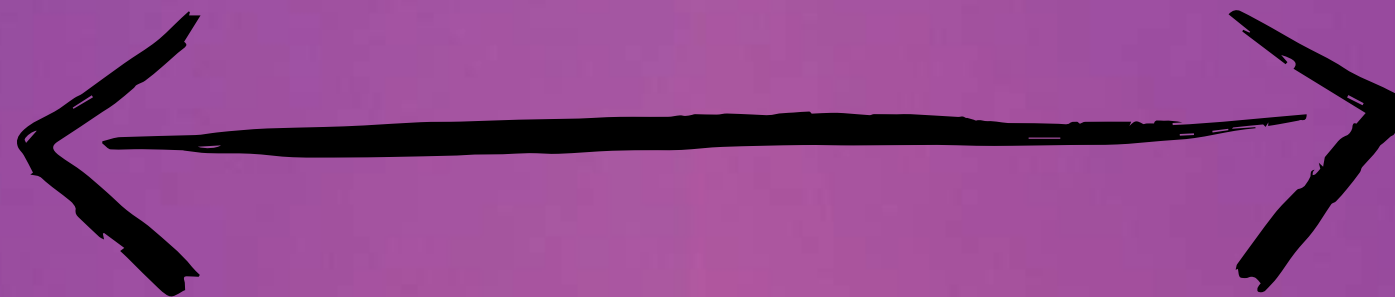
HOW DOES IT WORK?



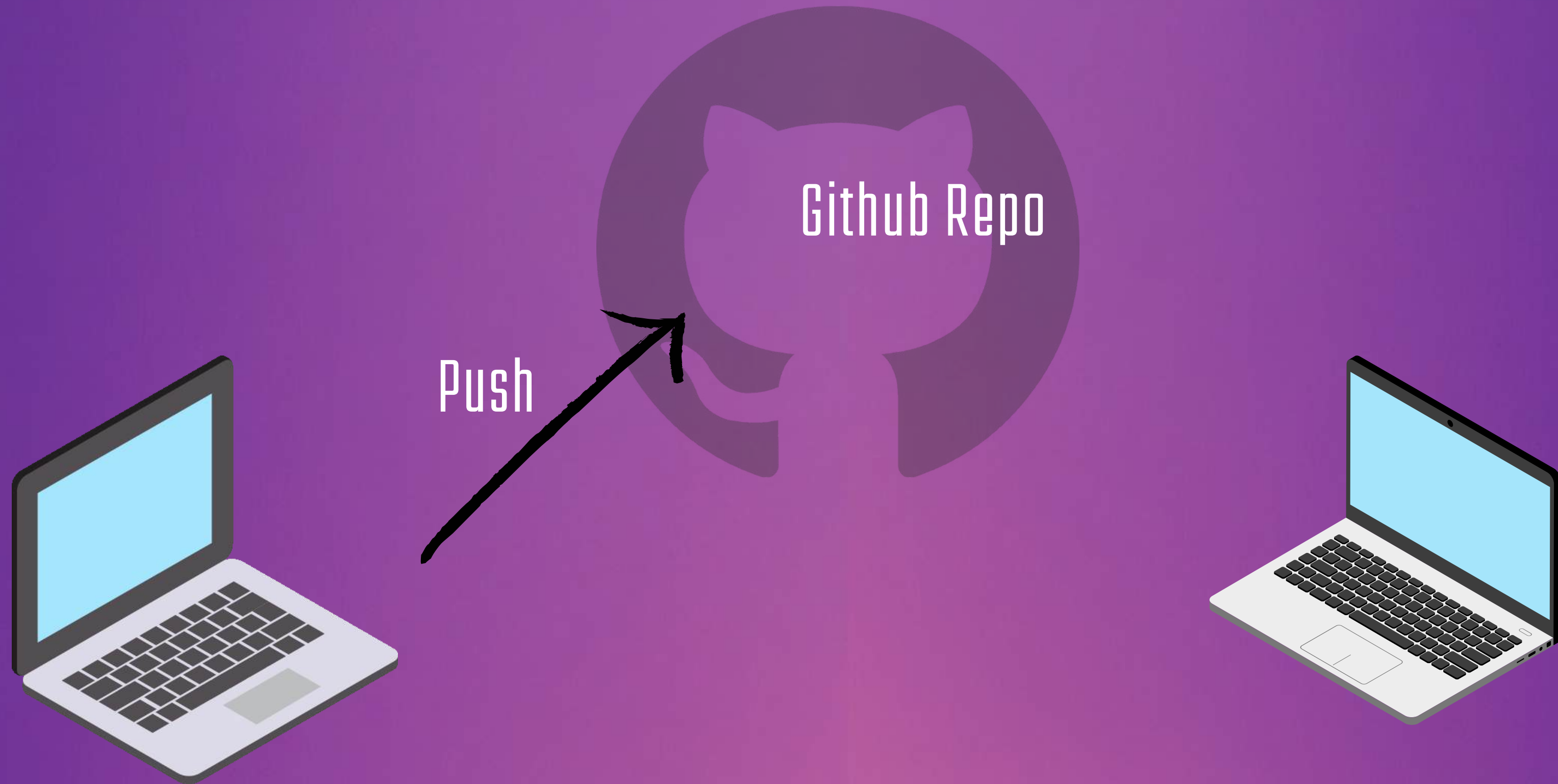
Terminal



Your laptop



HOW DOES IT WORK?



ANATOMY OF A PUSH



`git add`

`git commit`

`git push`



Github Repo



HOW DOES IT WORK?



HOW DOES IT WORK?



repository

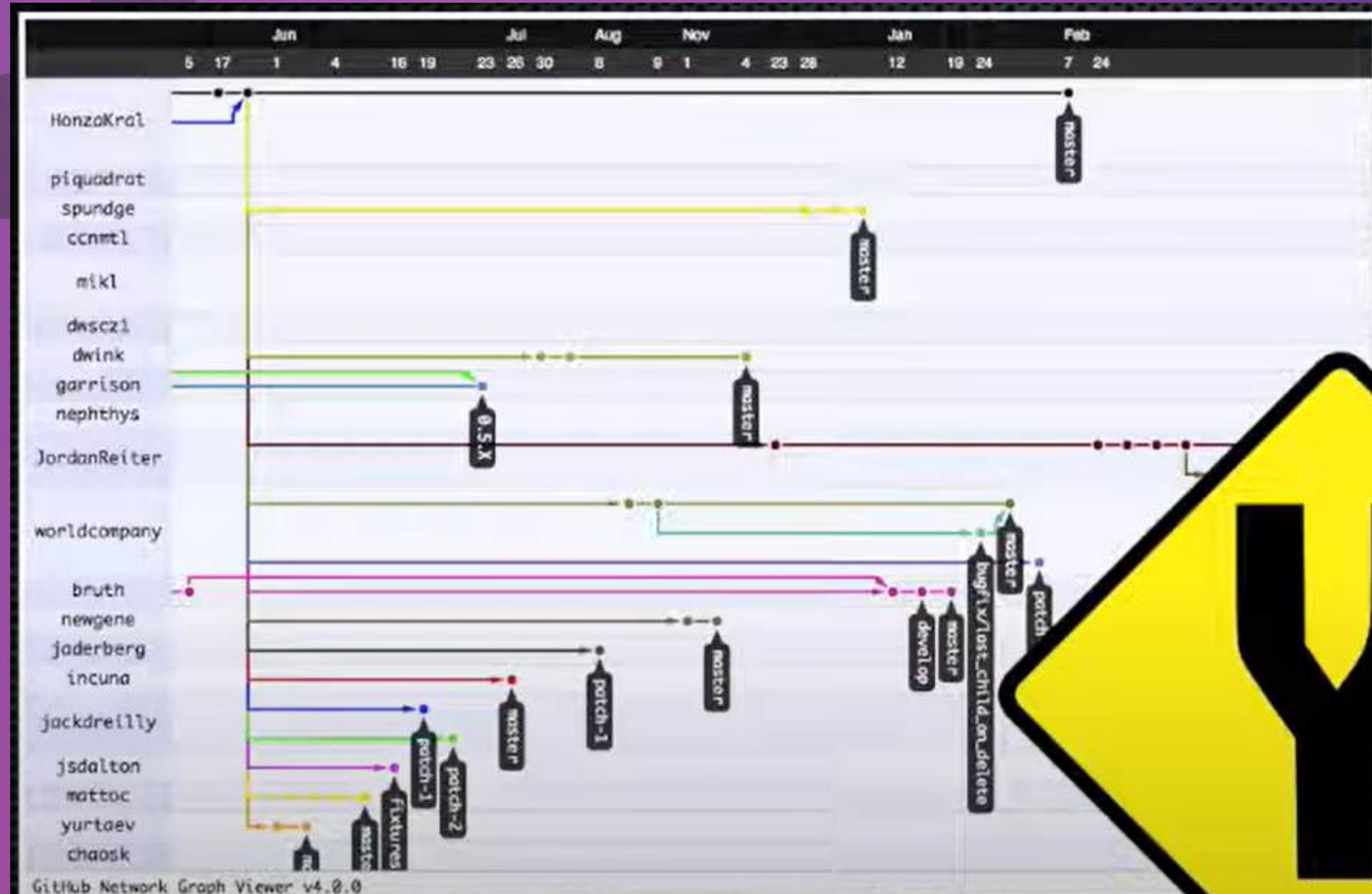
Clone

Github Repo

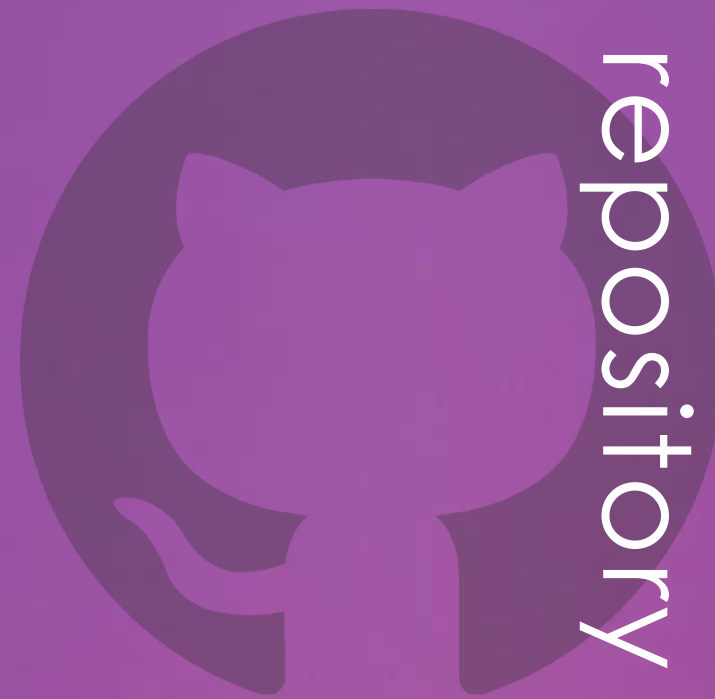


FORKING

- Experimentation and Customization
- Collaborative Development
- Open Source Contribution



HOW DOES IT WORK?



Pull Request

Github Repo



README.MD FILE

📖 README 🤝 Code of conduct ⚖️ License



Welcome to fastai

🔄 CI passing pypi version.png v2.7.14 conda version.png v2.7.14 📄 docs

Installing

You can use fastai without any installation by using [Google Colab](#). In fact, every page of this documentation is also available as an interactive notebook - click "Open in colab" at the top of any page to open it (be sure to change the Colab runtime to "GPU" to have it run fast!) See the fast.ai documentation on [Using Colab](#) for more information.

You can install fastai on your own machines with conda (highly recommended), as long as you're running Linux or Windows (NB: Mac is not supported). For Windows, please see the "Running on Windows" for important notes.

We recommend using [miniconda](#) (or miniforge). First install PyTorch using the conda line shown [here](#), and then run:

```
conda install -c fastai fastai
```



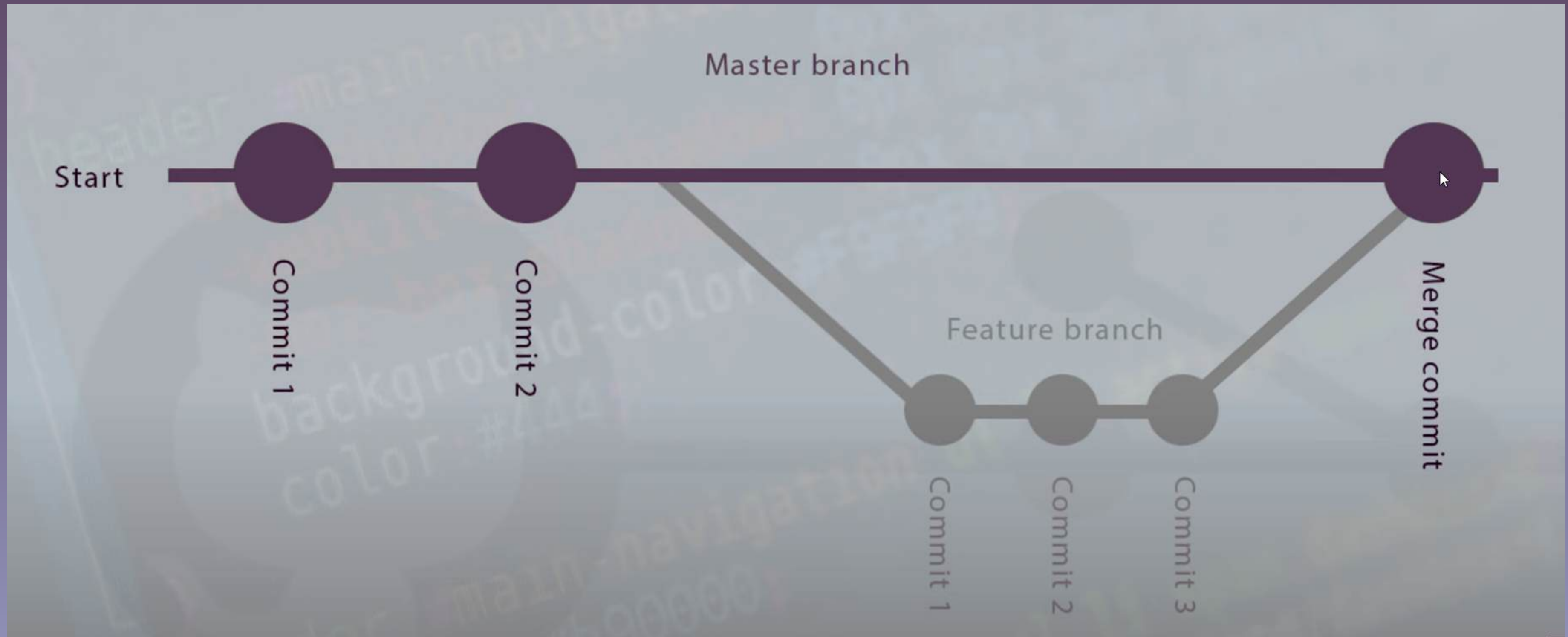
To install with pip, use: `pip install fastai`.

If you plan to develop fastai yourself, or want to be on the cutting edge, you can use an editable install (if you do this, you should also use an editable install of [fastcore](#) to go with it.) First install PyTorch, and then:

```
git clone https://github.com/fastai/fastai
pip install -e "fastai[dev]"
```



BRANCHING



MAKING NEW REPOSITORY

Create a new repository

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

Required fields are marked with an asterisk ().*

Owner *

Vedkotawadekar

Repository name *


Team_project

Team_project is available.


Great repository names are short and memorable. Need inspiration? How about [urban-couscous](#) ?

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:

☒

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

Add .gitignore


.gitignore template: None


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

Choose a license

License: None

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

This will set  **main** as the default branch. Change the default name in your [settings](#).

 You are creating a public repository in your personal account.

Create repository

Create a new repository

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

Required fields are marked with an asterisk (*).

Owner *




Repository name *



Team_project is available.

Great repository names are short and memorable. Need inspiration? How about **urban-couscous** ?

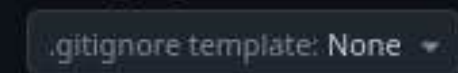
Description (optional)

- ☒  **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:

- ☒ **Add a README file**
This is where you can write a long description for your project. [Learn more about READMEs.](#)

Add .gitignore




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

Choose a license



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

This will set **main** as the default branch. Change the default name in your [settings](#).

 You are creating a public repository in your personal account.

Create repository


```
user@pop-os:~$ git config --global user.name "Vedkotawadekar"
user@pop-os:~$ git config --global user.email "kotawadekarved@gmail.com"
user@pop-os:~$ pwd
/home/user
user@pop-os:~$ mkdir workspace
user@pop-os:~$ cd workspace/
user@pop-os:~/workspace$ git clone https://github.com/Vedkotawadekar/team__project.git
Cloning into 'team__project'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (3/3), done.
user@pop-os:~/workspace$ ls
team__project
user@pop-os:~/workspace$ cd team__project/
user@pop-os:~/workspace/team__project$ ls
README.md
user@pop-os:~/workspace/team__project$ cat README.md
# team__projectuser@pop-os:~/workspace/team__project$
user@pop-os:~/workspace/team__project$ touch add.py
user@pop-os:~/workspace/team__project$ ls
add.py  README.md
user@pop-os:~/workspace/team__project$ gedit add.py
user@pop-os:~/workspace/team__project$

user@pop-os:~/workspace/Team__project$ ls
add.py  README.md
user@pop-os:~/workspace/Team__project$ touch reverse.py
user@pop-os:~/workspace/Team__project$ ls
add.py  README.md  reverse.py
user@pop-os:~/workspace/Team__project$ gedit reverse.py
user@pop-os:~/workspace/Team__project$ touch merge.py
user@pop-os:~/workspace/Team__project$ ls
add.py  merge.py  README.md  reverse.py
user@pop-os:~/workspace/Team__project$ gedit merge.py
user@pop-os:~/workspace/Team__project$ touch handle.py
user@pop-os:~/workspace/Team__project$ ls
add.py  handle.py  merge.py  README.md  reverse.py
user@pop-os:~/workspace/Team__project$ gedit handle.py
user@pop-os:~/workspace/Team__project$ touch filter.py
user@pop-os:~/workspace/Team__project$ ls
add.py  filter.py  handle.py  merge.py  README.md  reverse.py
user@pop-os:~/workspace/Team__project$ git status
On branch main
Your branch is up to date with 'origin/main'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
```



```

pathspec: merge.py did not match any files
user@pop-os:~/workspace/Team_project$ git add add.py filter.py handle.py merge.py reverse.py
user@pop-os:~/workspace/Team_project$ git status
On branch main
Your branch is up to date with 'origin/main'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   add.py
    new file:   filter.py
    new file:   handle.py
    new file:   merge.py
    new file:   reverse.py

user@pop-os:~/workspace/Team_project$ git commit -m "Pushing all files"
Author identity unknown

*** Please tell me who you are.

Run

  git config --global user.email "you@example.com"
  git config --global user.name "Your Name"

to set your account's default identity.
Omit --global to set the identity only in this repository.

fatal: unable to auto-detect email address (got 'user@pop-os.(none)')
user@pop-os:~/workspace/Team_project$ git config --global user.email "kotawadekarved@gmail.com"
user@pop-os:~/workspace/Team_project$ git config --global user.name "Vedkotawadekar"
user@pop-os:~/workspace/Team_project$ git status
On branch main
Your branch is up to date with 'origin/main'.

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   add.py
    new file:   filter.py
    new file:   handle.py
    new file:   merge.py
    new file:   reverse.py

user@pop-os:~/workspace/Team_project$ git commit -m "Pushing all files"
[main cce008d] Pushing all files
5 files changed, 41 insertions(+)
create mode 100644 add.py
create mode 100644 filter.py
create mode 100644 handle.py
create mode 100644 merge.py
create mode 100644 reverse.py
user@pop-os:~/workspace/Team_project$ git status
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean
user@pop-os:~/workspace/Team_project$ git push origin main
Username for 'https://github.com': Vedkotawadekar
Password for 'https://Vedkotawadekar@github.com':
remote: Support for password authentication was removed on August 13, 2021.
remote: Please see https://docs.github.com/en/get-started/getting-started-with-git/about-remote-repositories#cloning-with-https-urls for information on currently recommended modes of authentication.
fatal: Authentication failed for 'https://github.com/Vedkotawadekar/Team_project.git/'
user@pop-os:~/workspace/Team_project$ git remote set-url origin https://ghp_OQ0xuAJArxihOQxoGcfPA1z7tUXga021GYwK@github.com/Vedkotawadekar/Team_project
user@pop-os:~/workspace/Team_project$ git push origin main
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 6 threads
Compressing objects: 100% (7/7), done.
Writing objects: 100% (7/7), 1000 bytes | 1000.00 KiB/s, done.
Total 7 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/Vedkotawadekar/Team_project

```


ADDING COLLABORATORS

Team Collaboration
Shared Responsibility
Increased Productivity
Diverse Perspectives
Learning and Growth
Backup and Redundancy

General

Access

Collaborators

Moderation options

Code and automation

Branches

Tags

Rules

Actions

Webhooks

Environments

Codespaces

Pages

Security

Code security and analysis

Deploy keys

Secrets and variables

Integrations

GitHub Apps

Email notifications

Who has access

PUBLIC REPOSITORY

This repository is public and visible to anyone.

[Manage](#)

DIRECT ACCESS

3 have access to this repository. [3 collaborators.](#)

Manage access

Add people

Select all

Type

Find a collaborator

☐ **chaits1412**
Collaborator

Remove

☐ **RS**
rashishetty25 • Collaborator

Remove

☐ **sanika318**
Collaborator

Remove

Get team access control and discussions for your



contributors in an organization.

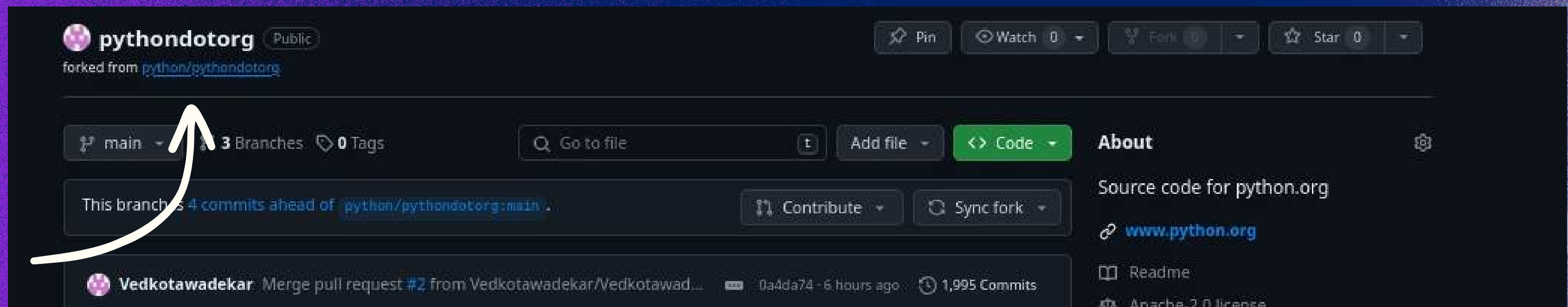
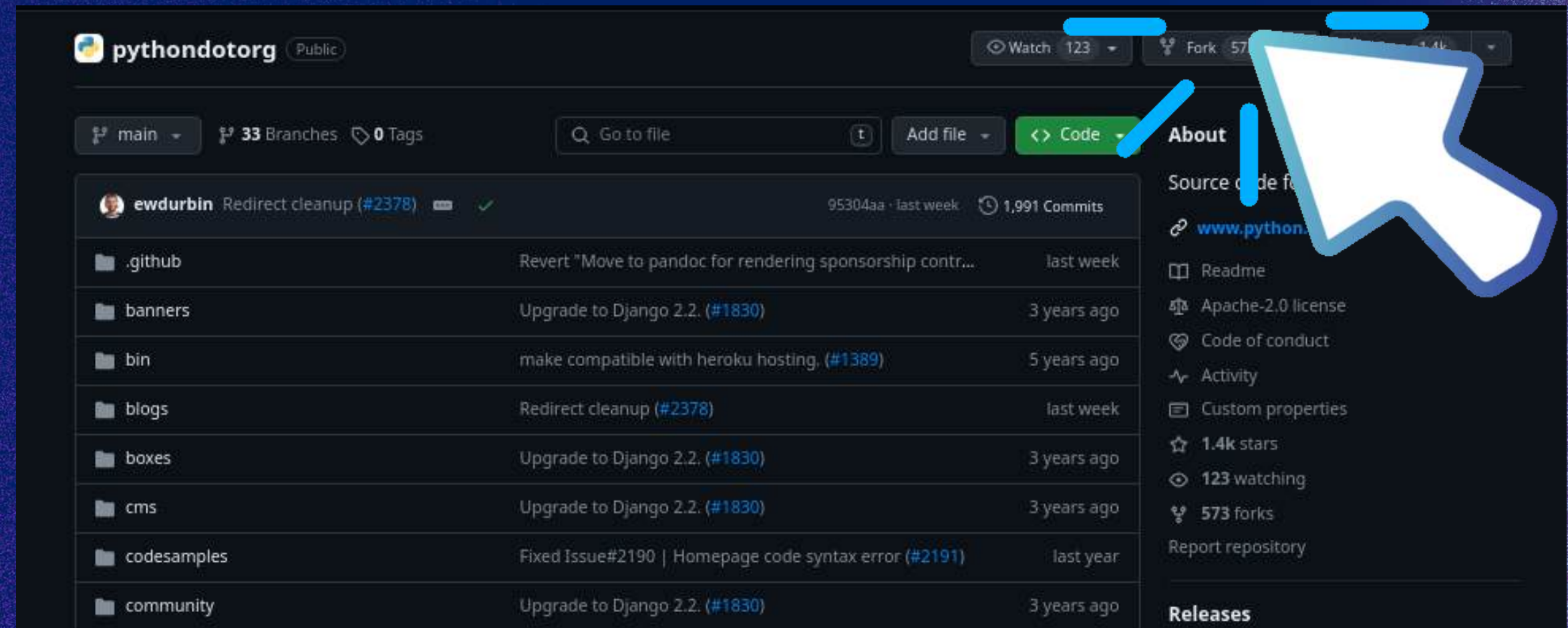
NEW

Private repos and unlimited members are free.

Create an organization

FORKING

- Independent Development
- Contributing to Open Source
- Collaborative Development
- Code Review and Feedback
- Educational Purposes
- Maintaining Personal Copies



pythondotorg / merge.py in main

Edit Preview Code 55% faster with GitHub Copilot

```
1 def merge_dicts(dict1, dict2):
2     merged_dict = dict1.copy()
3     merged_dict.update(dict2)
4     return merged_dict
5
6
7 dict1 = {"a": 1, "b": 2}
8 dict2 = {"c": 3, "d": 4}
9 merged_dict = merge_dicts(dict1, dict2)
10 print("Merged dictionary:", merged_dict)
11
```

Comparing changes

Choose two branches to see what's changed or to start a new pull request. If you need to, you can [compare across forks](#) or [learn more about diff comparisons](#).

base: main

compare: Vedkotawadekar-patch-2

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

Discuss and review the changes in this comparison with others. [Learn about pull requests](#)

Create pull request

1 commit

1 file changed

1 contributor

Create merge.py #2

Open Vedkotawadekar wants to merge 1 commit into main from Vedkotawadekar-patch-2

Conversation 0

Commits 1

Checks 0

Files changed 1

+10 -0

Vedkotawadekar commented 5 hours ago

No description provided.

Create merge.py

Verified abb5f6a

Add more commits by pushing to the Vedkotawadekar-patch-2 branch on Vedkotawadekar/pythondotorg.

Checking for ability to merge automatically...

Hang in there while we check the branch's status.

Merge pull request or view [command line instructions](#).

Reviewers

No reviews

Still in progress? [Convert to draft](#)

Assignees

No one—assign yourself

Labels

None yet

Projects

None yet

Milestone

No milestone

Create merge.py #2

Open Vedkotawadekar wants to merge 1 commit into `main` from `Vedkotawadekar-patch-2`

Conversation Commits Checks Files changed

Vedkotawadekar commented 5 hours ago Owner ...

No description provided.

Create merge.py Verified a0b5f6a

Add more commits by pushing to the `Vedkotawadekar-patch-2` branch on `Vedkotawadekar/pythondotorg`.

Require approval from specific reviewers before merging
[Rulesets](#) ensure specific people approve pull requests before they're merged. Add rule ×

A build service has not been set up
We have detected a top-level `Dockerfile`. Pick from [apps that can perform automatic builds](#).

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

Merge pull request or view [command line instructions](#).

Comparing changes

Choose two branches to see what's changed or to start a new pull request. If you need to, you can also [compare across forks](#) or [learn more about diff comparisons](#).

base: main compare: Vedkotawadekar-patch-2 ✓ Able to merge. These branches can be automatically merged.

Discuss and review the changes in this comparison with others. [Learn about pull requests](#) Create pull request

1 commit 1 file changed 1 contributor

Commits on Feb 28, 2024

Create merge.py Verified a0b5f6a

Showing 1 changed file with 10 additions and 0 deletions. Split Unified

```
@@ -0,0 +1,10 @@
1 + def merge_dicts(dict1, dict2):
2 +     merged_dict = dict1.copy()
3 +     merged_dict.update(dict2)
4 +     return merged_dict
5 +
6 +
7 + dict1 = {"a": 1, "b": 2}
8 + dict2 = {"c": 3, "d": 4}
9 + merged_dict = merge_dicts(dict1, dict2)
10 + print("Merged dictionary:", merged_dict)
```

Create merge.py #2

Merged Vedkotawadekar merged 1 commit into `main` from `Vedkotawadekar-patch-2` 5 hours ago

Conversation Commits Checks Files changed

Vedkotawadekar commented 5 hours ago Owner ...

No description provided.

Create merge.py Verified a0b5f6a

Vedkotawadekar merged commit `0a4da74` into `main` 5 hours ago Revert

Pull request successfully merged and closed
You're all set—the `Vedkotawadekar-p-` branch can be safely deleted. Delete branch



cc.txt

GITHUB ACTIONS

CONTINUOUS INTEGRATION

CONTINUOUS DELIVERY

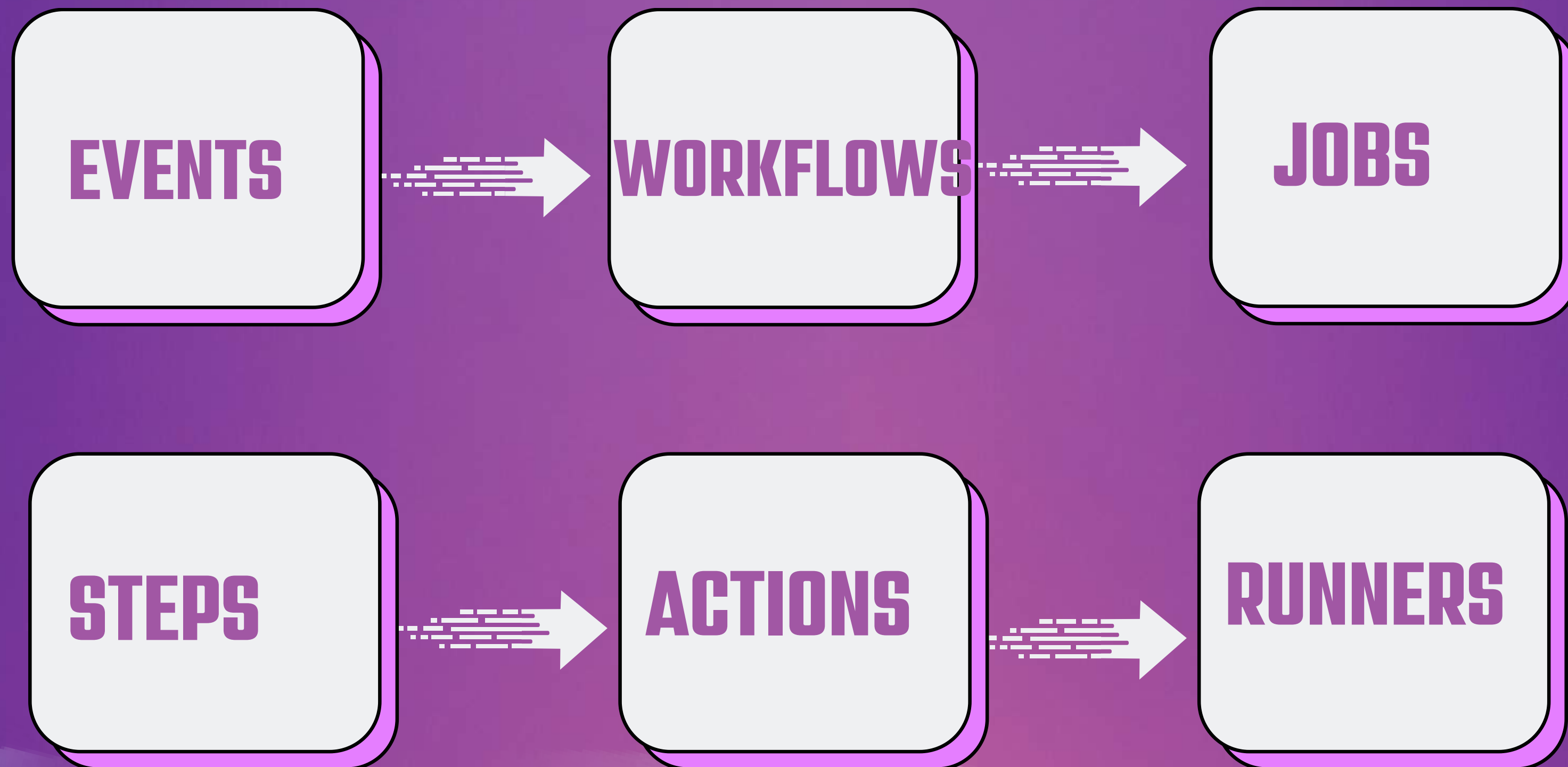
CONTINUOUS DEPLOYMENT



Passed!

Passed!

THE COMPONENTS OF GITHUB ACTIONS




CREATING A YAML FILE

Code

Blame

17 lines (14 loc) · 340 Bytes

 Code 55% faster with GitHub

```
1  name: Super-Linter
2
3  on: push
4
5  jobs:
6    super-lint:
7      name: Lint code base
8      runs-on: ubuntu-latest
9      steps:
10       - name: Checkout code
11         uses: actions/checkout@v2
12
13       - name: Run Super-Linter
14         uses: github/super-linter@v4
15         env:
16           DEFAULT_BRANCH: main
17           GITHUB_TOKEN: ${ secrets.GITHUB_TOKEN }
```


CODE

```
def add_numbers(a, b):  
    return a + b  
  
result = add_numbers(5,  
                     3)  
print("Result:", result)
```

PUSH



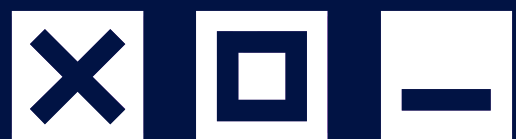
repository



AUTOMATES
WORKFLOW

The screenshot displays the GitHub Actions interface for a repository named 'Vedkotawadekar / team'. The 'Actions' tab is selected, showing a workflow named 'Create superlinter.yml #1' with a green checkmark indicating success. The workflow summary shows it 'succeeded 9 minutes ago in 1m 42s'. The 'Jobs' section lists a single job, 'Lint code base', which is also successful. The 'Run details' section provides a step-by-step breakdown of the job's execution:

Step	Duration
Set up job	1s
Pull ghcr.io/github/super-linter:v4.10.0	1m 27s
Checkout code	0s
Run Super-Linter	11s
Post Checkout code	0s
Complete job	0s

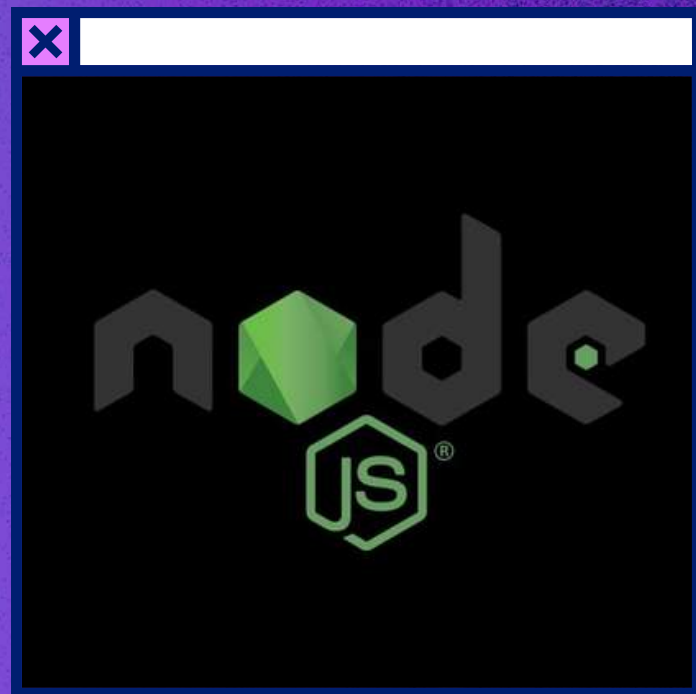


INTEGRATIONS

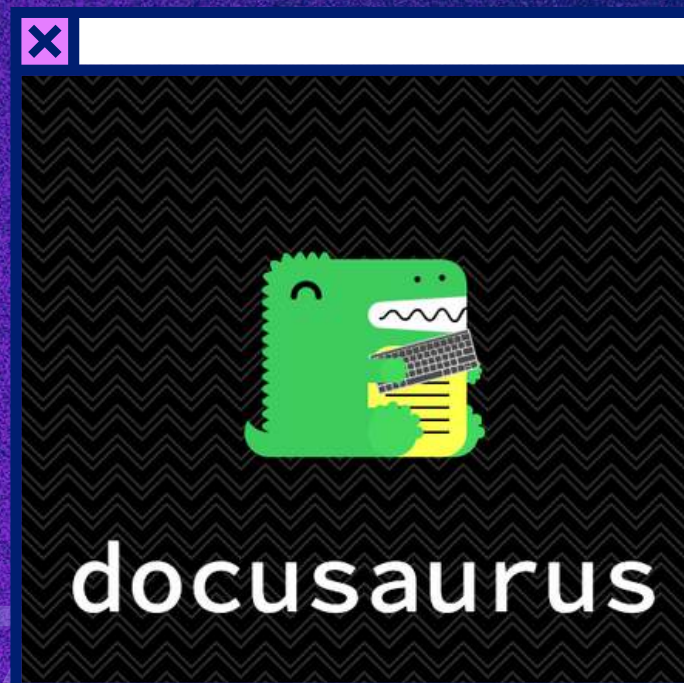
Github seamlessly integrates with a myriad of third-party tools, enhancing collaboration & workflow efficiency.

- > CI/CD Platforms
- > Project Management Tools
- > Code Analysis Services

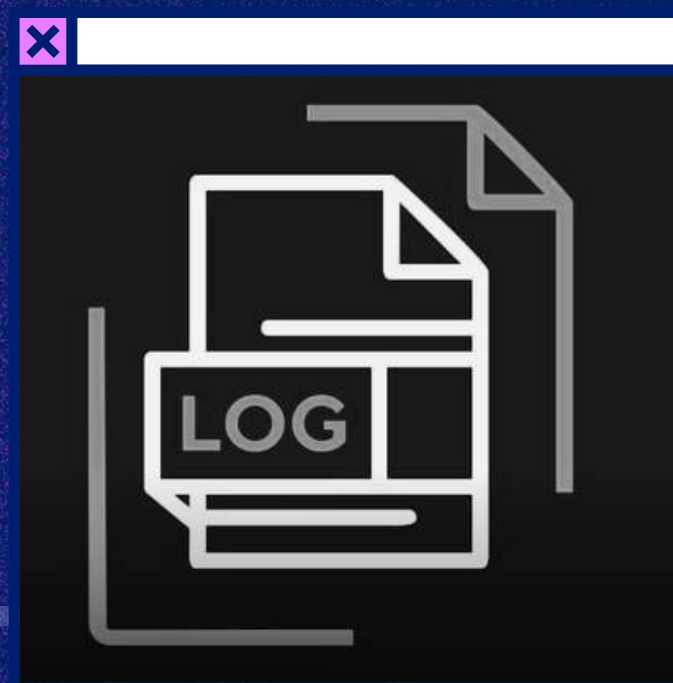
LOG FILE GENERATION WORKFLOW



install nodejs



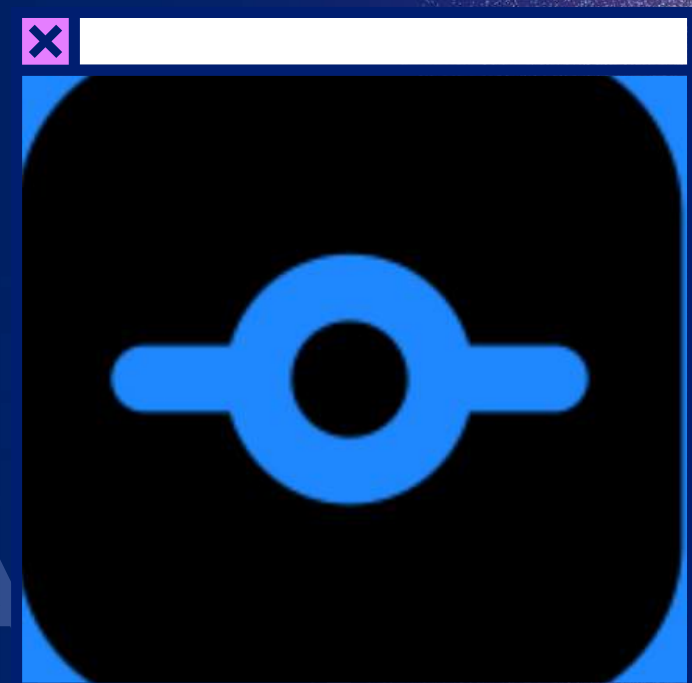
setup docusaurus



log.md



.yml



commit




```
bda36@pop-os:~$ sudo apt install nodejs
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer required:
  libnvidia-cfg1-535 libnvidia-common-535 libnvidia-compute-535
  libnvidia-compute-535:i386 libnvidia-decode-535 libnvidia-decode-535:i386
  libnvidia-encode-535 libnvidia-encode-535:i386 libnvidia-extra-535
  libnvidia-fbc1-535 libnvidia-fbc1-535:i386 libnvidia-gl-535
  libnvidia-gl-535:i386 nvidia-compute-utils-535 nvidia-dkms-535
  nvidia-driver-535 nvidia-firmware-535-535.113.01 nvidia-kernel-common-535
```

```
bda36@pop-os:~$ sudo apt install npm
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages were automatically installed and are no longer required:
  libnvidia-cfg1-535 libnvidia-common-535 libnvidia-compute-535
  libnvidia-compute-535:i386 libnvidia-decode-535 libnvidia-decode-535:i386
  libnvidia-encode-535 libnvidia-encode-535:i386 libnvidia-extra-535
  libnvidia-fbc1-535 libnvidia-fbc1-535:i386 libnvidia-gl-535
  libnvidia-gl-535:i386 nvidia-compute-utils-535 nvidia-dkms-535
  nvidia-driver-535 nvidia-firmware-535-535.113.01 nvidia-kernel-common-535
  nvidia-kernel-source-535 nvidia-utils-535 xserver-xorg-video-nvidia-535
```

```
bda36@pop-os:~$ cd Team_project
bda36@pop-os:~/Team_project$ mkdir my_docusaurus_project
bda36@pop-os:~/Team_project$ cd my_docusaurus_project
bda36@pop-os:~/Team_project/my_docusaurus_project$ npm init
This utility will walk you through creating a package.json file.
It only covers the most common items, and tries to guess sensible defaults.
```

```
See `npm help init` for definitive documentation on these fields
and exactly what they do.
```




sophshep 10:30 AM

/github subscribe <https://github.com/github/fetch>



GitHub APP 10:30 AM

subscribed to [github/fetch](#)



GitHub APP 11:35 AM

Pull request opened by bkeepers



bkeepers

#521 Add additional fallbacks

This extends the solution in #253 for React Native compatibility.

**GITHUB
+
SLACK**

**GITHUB
+
JIRA**

QUICK FILTERS: Bugs Done Product UI Server Only My Issues Recently Updated

Progress 3 Code Review 5 Done

Create 90 day plans for all departments in the Mars Office
Local Mars Office
9 TIS-12

Draft out analytics plan for Saturn Summer Sizzle website
Local Mars Office
3 TIS-11

Email non registered users to sign up with Teams In Space
Large Team Support
2 TIS-45

Register with the Mars Ministry of Revenue
Local Mars Office
3 TIS-13

Draft network plan for Mars Office
Delicious Space Nutrition
5 TIS-49

Add pointer to main css file to instruct users to create child themes
Large Team Support
TIS-56

Developer Toolbox does not display by default
Drop files to attach, or [browse](#).

Sub-Tasks
There are no sub-tasks
Create Sub-Task

Development
2 branches
8 commits
Latest 2/Mar/17 1:39 AM



GitHub

**Built for
developers**

THANK YOU!



Cloud Computing

