

# **Git Tutorial**

**Some basic use cases using GitHub Desktop.**

# Getting Started



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**GitHub Universe: A global developer event**

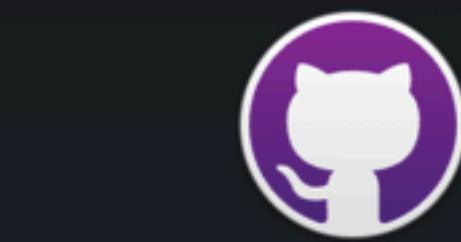
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# Let's build from here, magically

The complete developer platform to build, scale, and deliver secure software.

Email address

Sign up for GitHub



Overview Release Notes Help

## GitHub Desktop

Focus on what matters instead of fighting with Git. Whether you're new to Git or a seasoned user, GitHub Desktop simplifies your development workflow.

Download for macOS

Feeling brave?

Try new features in the Beta Channel before they're released.

Apple silicon?

Download for an Apple silicon Mac. See the [Apple docs](#) about Apple vs Intel chips.

Windows?

Download for Windows

By downloading, you agree to the [Open Source Applications Terms](#).

**Sign up to GitHub. Download GitHub Desktop.**

The screenshot shows a GitHub repository page for the user 'joaopfonseca' named 'Data-Mining-22-23'. The repository is public, as indicated by the 'Public' badge. The 'Code' tab is selected. The repository has 1 branch and 0 tags. The commit history shows 9 commits from 'fpontejos' adding test files for a git demo. The repository has 13 forks and 2 stars. The 'About' section describes it as class materials for the practical classes of the Msc course Data Mining taught at Nova IMS - Fall 2022/2023.

joaopfonseca / Data-Mining-22-23 Public

Code Issues Pull requests Actions Projects Security Insights

main 1 branch 0 tags Go to file Code About

fpontejos add test file for git demo 7433716 24 minutes ago 9 commits

notebooks Lab 2 yesterday

notebooks\_solutions Lab 2 yesterday

ppts add test file for git demo 24 minutes ago

.gitignore First commit 7 days ago

LICENSE First commit 7 days ago

README.rst Add link to git cheat sheet 7 days ago

Readme MIT license 2 stars 2 watching 13 forks

Releases

Fork the repository

# **Clone Remote to Local**

[fpontejos / Data-Mining-22-23](#) Public  
forked from [joaopfonseca/Data-Mining-22-23](#)

<> Code Pull requests Actions Projects Wiki Security Insights Settings

main 1 branch 0 tags Go to file Add file Code

This branch is 1 commit behind joaopfonseca:main.

Contribute Sync fork

joaopfonseca Lab 2 1c68e84 yesterday 8 commits

- notebooks Lab 2 yesterday
- notebooks\_solutions Lab 2 yesterday
- ppts Fix incorrect hyperlink 4 days ago
- .gitignore First commit 7 days ago
- LICENSE First commit 7 days ago
- README.rst Add link to git cheat sheet 7 days ago

Your fork (Remote) on [github.com](#)

[joaopfonseca / Data-Mining-22-23](#) Public Watch 2

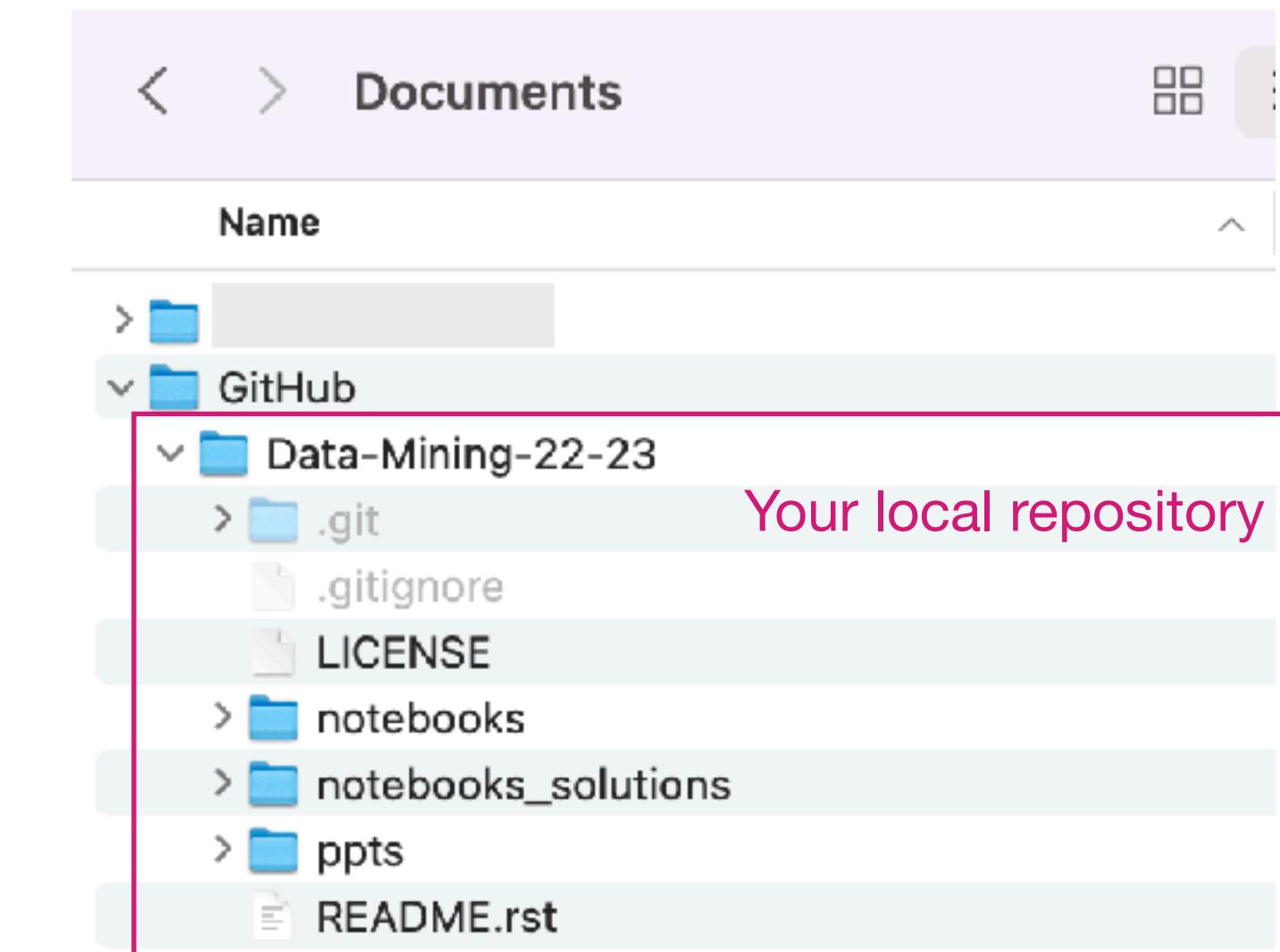
<> Code Issues Pull requests Actions Projects Wiki Security Insights

main 1 branch 0 tags Go to file Add file Code

joaopfonseca Lab 2 1c68e84 22 hours ago 8 commits

- notebooks Lab 2 22 hours ago
- notebooks\_solutions Lab 2 22 hours ago
- ppts Fix incorrect hyperlink 4 days ago
- .gitignore First commit 7 days ago
- LICENSE First commit 7 days ago
- README.rst Add link to git cheat sheet 7 days ago

The repo you forked from (Upstream) 7 days ago



Your Local repository is the copy of your remote that exists on github that lives on your local machine

## Some terminologies



# Let's get started!

Add a repository to GitHub Desktop to start collaborating

Create a Tutorial Repository...

Clone a Repository from the Internet...

Create a New Repository on your Hard Drive...

Add an Existing Repository from your Hard Drive...

**ProTip!** You can drag & drop an existing repository folder here to add it to Desktop

Filter your repositories

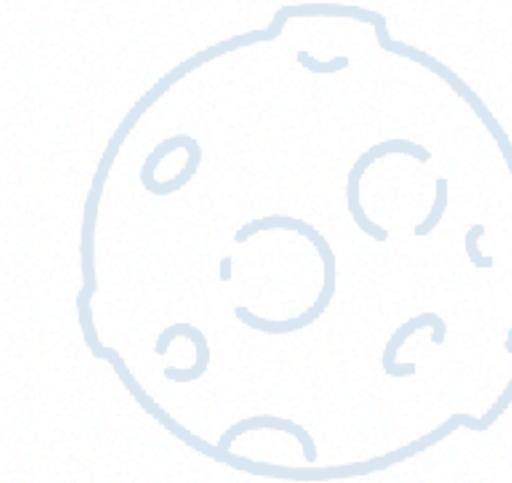
## Your Repositories



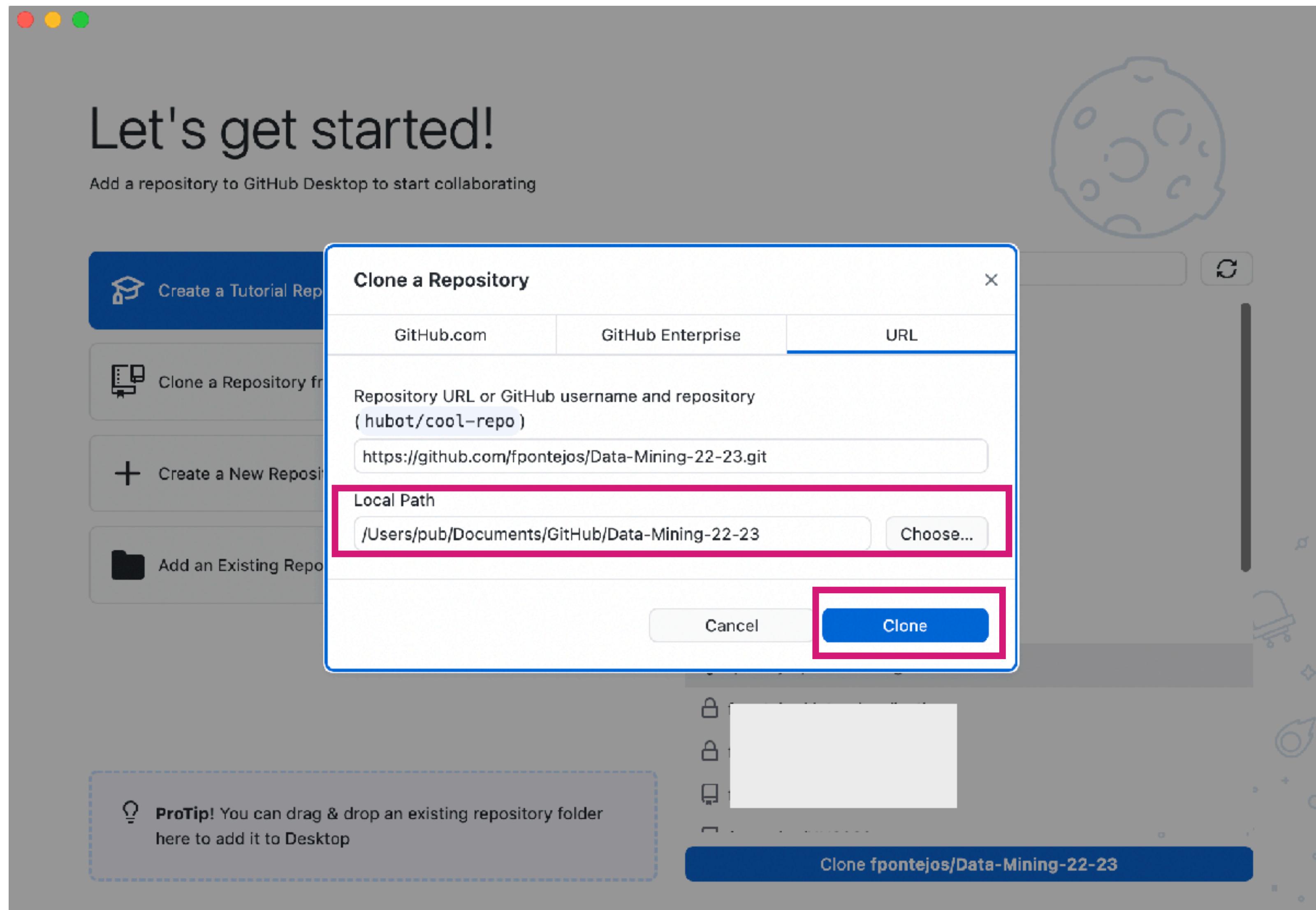
fpontejos/Data-Mining-22-23



Clone fpontejos/Data-Mining-22-23



**Select the repository you want to clone**



**Select where you want the repository to live on your computer. Click “Clone”.**

## How are you planning to use this fork?

X

You have changes on this branch. What would you like to do with them?

### To contribute to the parent project

We will help you contribute to the [joaopfonseca/Data-Mining-22-23](#) repository

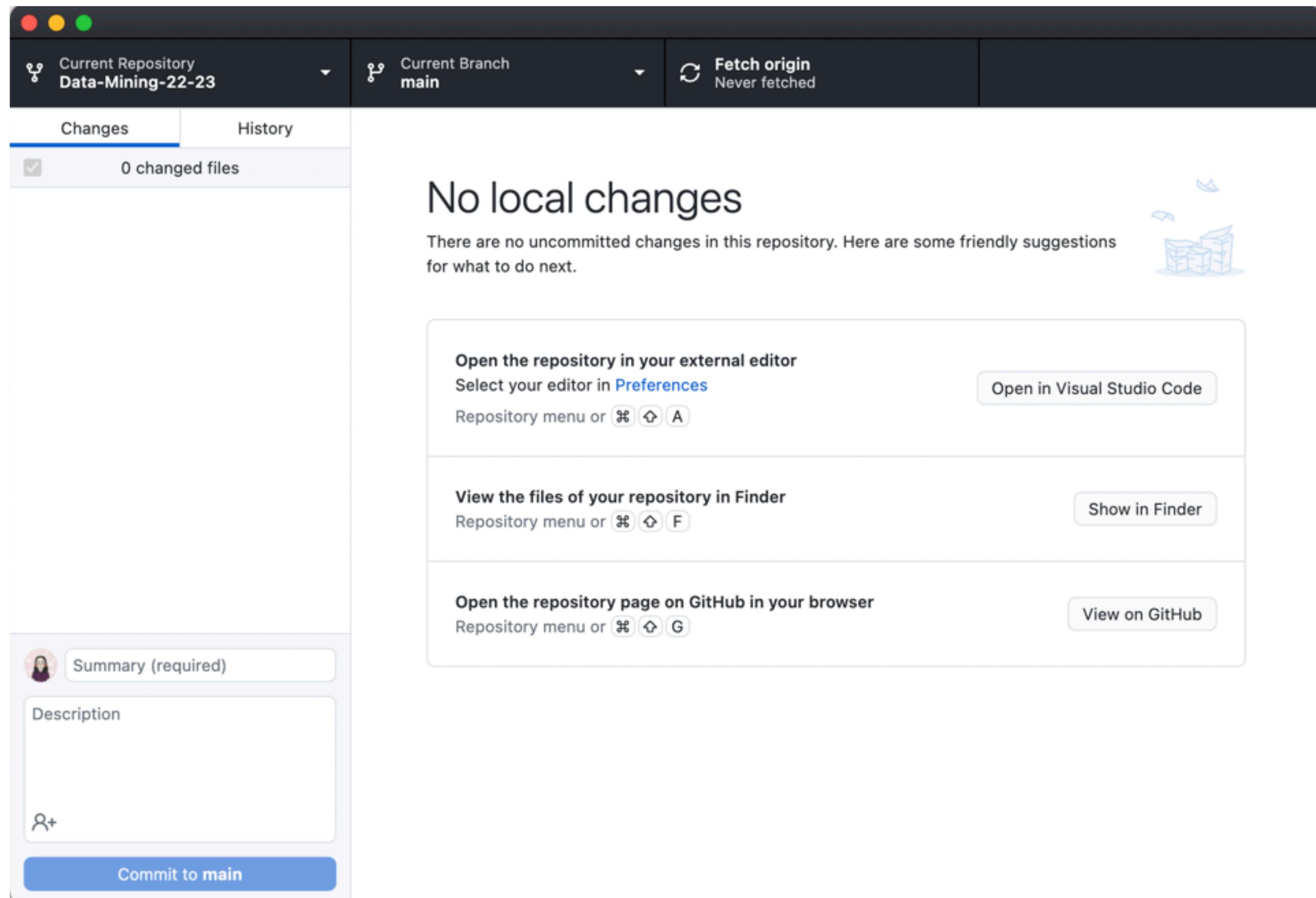
### For my own purposes

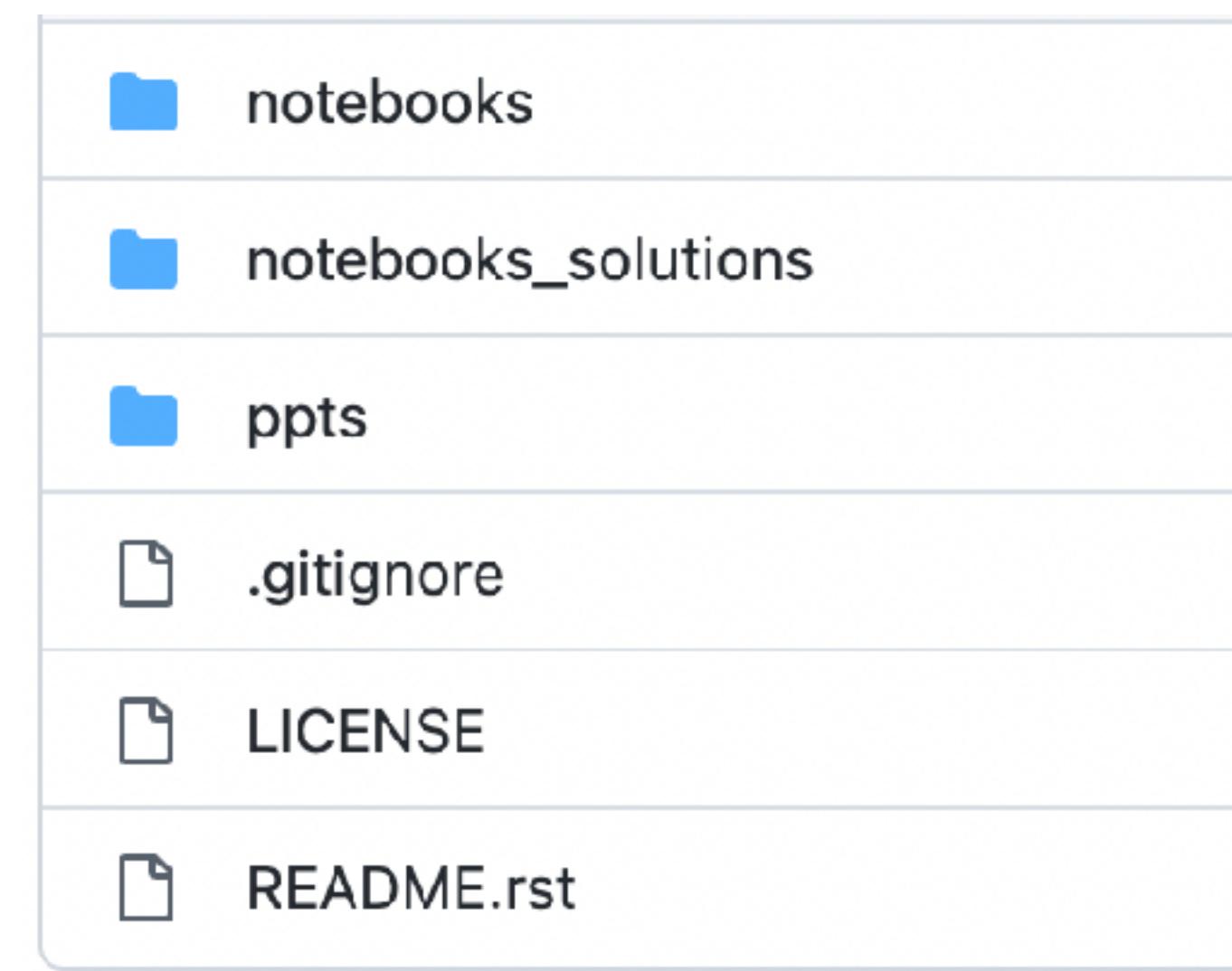
We will help you contribute to the [fpontejos/Data-Mining-22-23](#) repository

- Pull requests targeting [fpontejos/Data-Mining-22-23](#) will be shown in the pull request list.
- Issues will be created in [fpontejos/Data-Mining-22-23](#).
- "View on Github" will open [fpontejos/Data-Mining-22-23](#) in the browser.
- New branches will be based on [fpontejos/Data-Mining-22-23](#)'s default branch.
- Autocompletion of user and issues will be based on [fpontejos/Data-Mining-22-23](#).

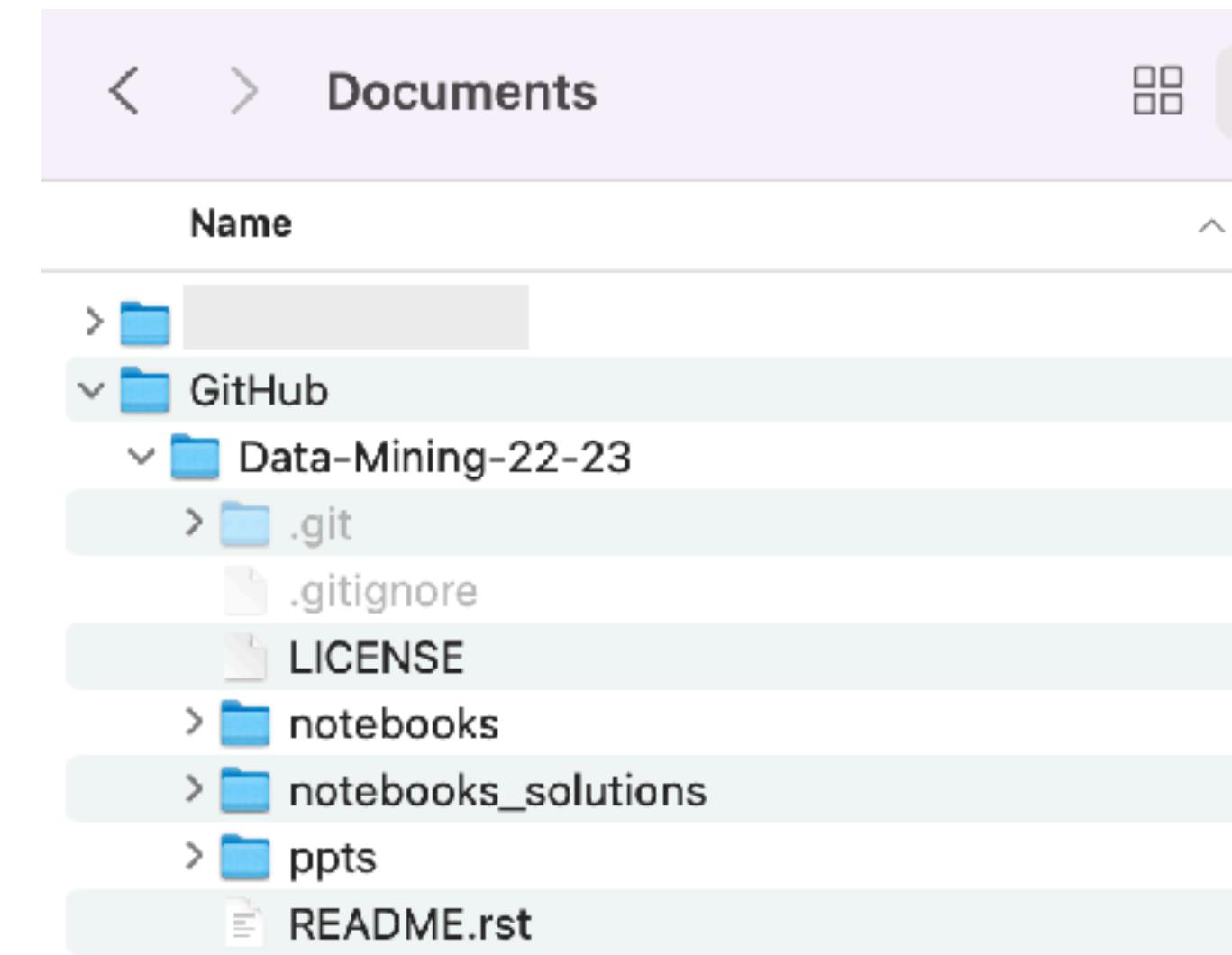
Cancel

Continue





[github.com \(remote\)](#)



local

**Keep up to date with upstream  
(no local changes)**

[fpontejos / Data-Mining-22-23](#) Public  
forked from [joaopfonseca/Data-Mining-22-23](#)

<> Code Pull requests Actions Projects Wiki Security Insights Settings

main 1 branch 0 tags Go to file Add file Code

This branch is 1 commit behind joaopfonseca:main.

Contribute Sync fork

joaopfonseca Lab 2 1c68e84 yesterday 8 commits

- notebooks Lab 2 yesterday
- notebooks\_solutions Lab 2 yesterday
- ppts Fix incorrect hyperlink 4 days ago
- .gitignore First commit 7 days ago
- LICENSE First commit 7 days ago
- README.rst Add link to git cheat sheet 7 days ago

Your fork (Remote) on [github.com](#)

[joaopfonseca / Data-Mining-22-23](#) Public Watch 2

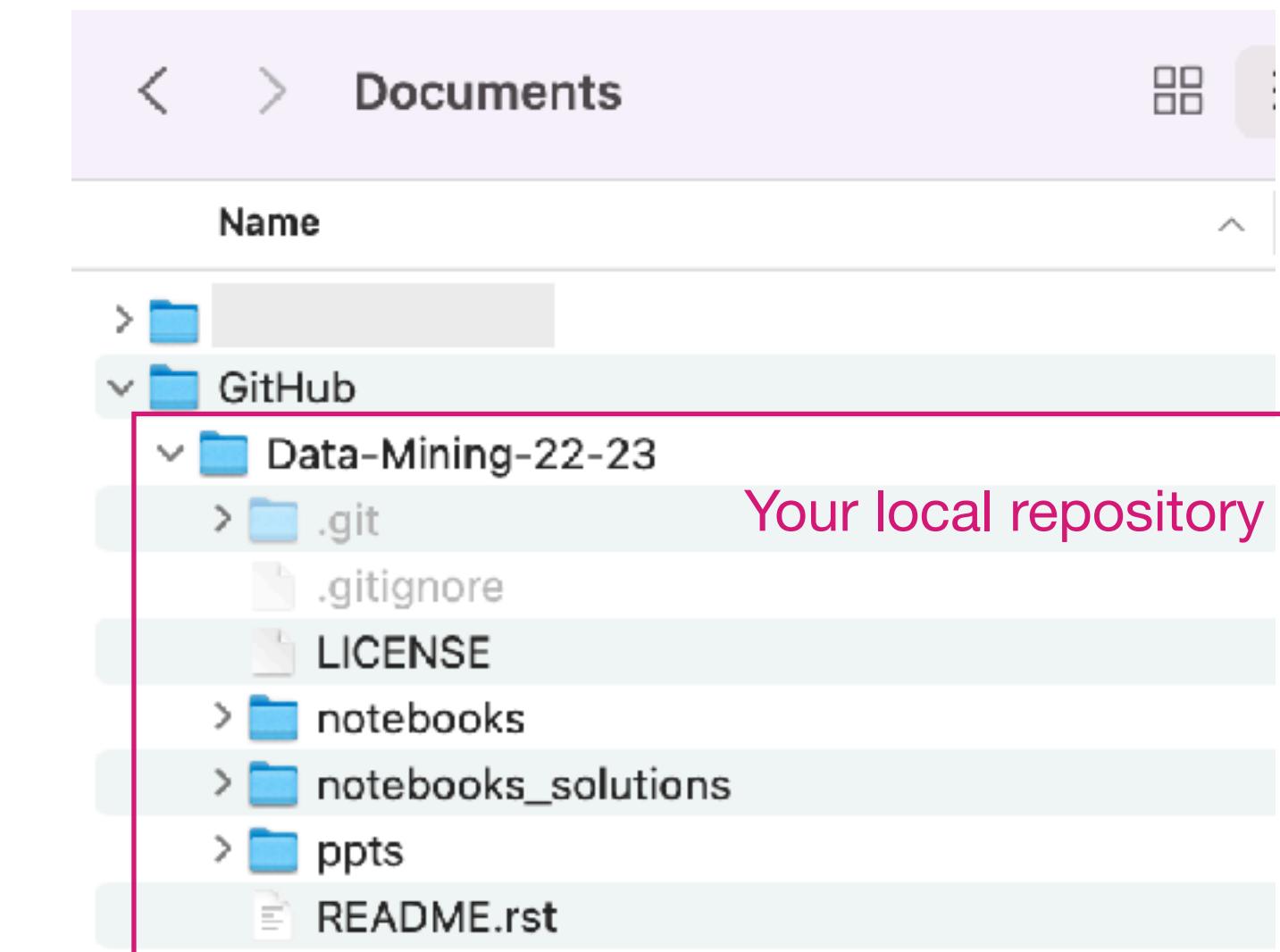
<> Code Issues Pull requests Actions Projects Wiki Security Insights

main 1 branch 0 tags Go to file Add file Code

joaopfonseca Lab 2 1c68e84 22 hours ago 8 commits

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- README.rst Add link to git cheat sheet 7 days ago

The repo you forked from (Upstream) 7 days ago



Your Local repository is the copy of your remote that exists on github that lives on your local machine

## Some terminologies

 **fpontejos / Data-Mining-22-23** Public

forked from [joaopfonseca/Data-Mining-22-23](#)

[Code](#) [Pull requests](#) [Actions](#) [Projects](#) [Wiki](#) [Security](#) [Insights](#) [Settings](#)

[main](#) [1 branch](#) [0 tags](#) [Go to file](#) [Add file](#) [Code](#)

This branch is [2 commits behind](#) joaopfonseca:main.

[Contribute](#) [Sync fork](#)

 **fpontejos** Add link to git cheat sheet

	notebooks	Lab 1
	notebooks_solutions	Lab 1
	ppts	Lab 1 PPT presentation
	.gitignore	First commit
	LICENSE	First commit
	README.rst	Add link to git cheat sheet

**This branch is out-of-date**  
Update branch to keep this branch up-to-date by syncing 2 commits from the upstream repository.  
[Learn more](#)

[Compare](#) [Update branch](#)

## Sync fork on GitHub

Successfully fetched and fast-forwarded from upstream joaopfonseca:main.

## fponcejos / Data-Mining-22-23 Public

forked from joaopfonseca/Data-Mining-22-23

Pin

Watch 0

Code

Pull requests

Actions

Projects

Wiki

Security

Insights

Settings

main ▾

1 branch

0 tags

Go to file

Add file ▾

Code ▾

This branch is up to date with joaopfonseca/Data-Mining-22-23:main.

Contribute ▾ Sync fork ▾



joaopfonseca Lab 2

1c68e84 22 hours ago 8 commits

	notebooks	Lab 2	22 hours ago
	notebooks_solutions	Lab 2	22 hours ago
	ppts	Fix incorrect hyperlink	4 days ago
	.gitignore	First commit	7 days ago
	LICENSE	First commit	7 days ago
	README.rst	Add link to git cheat sheet	7 days ago

Current Repository Data-Mining-22-23

Current Branch main

Fetch origin  
Last fetched 15 minutes ago

Changes History

0 changed files

# No local changes

There are no uncommitted changes in this repository. Here are some friendly suggestions for what to do next.

Open the repository in your external editor  
Select your editor in [Preferences](#)

Repository menu or ⌘ ⌘ A

Open in Visual Studio Code

View the files of your repository in Finder  
Repository menu or ⌘ ⌘ F

Show in Finder

Open the repository page on GitHub in your browser  
Repository menu or ⌘ ⌘ G

View on GitHub

Summary (required)

Description

Commit to main

Refreshing Repository Hang on...

Refreshing Repository Hang on...

GitHub

- GitHub
- Data-Mining-22-23
  - .git
  - .gitignore
  - LICENSE
  - notebooks
    - lab01\_distance\_matrix.ipynb
    - lab02\_close\_neighbors.ipynb
  - notebooks\_solutions
  - ppts
  - README.rst

# Keep track of local changes

The screenshot shows the GitHub Desktop application interface. At the top, there are three dropdown menus: 'Current Repository' set to 'Data-Mining-22-23', 'Current Branch' set to 'main', and 'Fetch origin' with a note 'Last fetched 2 hours ago'. Below these are two tabs: 'Changes' (selected) and 'History'. The 'Changes' tab displays a diff view for 'README.rst'. The left pane shows a list of changes: '1 changed file' and 'README.rst'. The right pane shows the diff content:

		17	17	@@ -17,3 +17,5 @@ in class. More resources may be added here throughout the semester:
		18	18	- `Getting Started with GitHub Desktop < <a href="https://docs.github.com/en/desktop/installing-and-configuring-github-desktop/overview/getting-started-with-github-desktop">https://docs.github.com/en/desktop/installing-and-configuring-github-desktop/overview/getting-started-with-github-desktop</a> >`
		19	19	- `Git Basics < <a href="https://www.freecodecamp.org/news/learn-the-basics-of-git-in-under-10-minutes-daa548267cc91/">https://www.freecodecamp.org/news/learn-the-basics-of-git-in-under-10-minutes-daa548267cc91/</a> >`
		20		- `Common Git Commands < <a href="https://www.freecodecamp.org/news/git-cheat-sheet/">https://www.freecodecamp.org/news/git-cheat-sheet/</a> >`
		21		+ +... This comment will be deleted ⚡

At the bottom left, there is a commit dialog with fields for 'Update README.rst', 'Description', and a '+' icon for adding files. A large blue button at the bottom says 'Commit to main'.

**GitHub Desktop shows you the changes you have made.**

The screenshot shows a GitHub commit interface. At the top, there's a navigation bar with 'Changes 1' (highlighted in blue), 'History', and a file list containing 'README.rst'. Below this is a diff view for 'README.rst' showing additions and deletions. A specific addition is highlighted with a red box:

```
@@ -17,3 +17,5 @@ in class. More resources may be added here throughout the semester:  
17 | 17 - `Getting Started with GitHub Desktop <https://docs.github.com/en/desktop/installing-and-configuring-github-desktop/overview/getting-started-with-github-desktop>`_  
18 | 18 - `Git Basics <https://www.freecodecamp.org/news/learn-the-basics-of-git-in-under-10-minutes-d548267cc91/>`_  
19 | 19 - `Common Git Commands <https://www.freecodecamp.org/news/git-cheat-sheet/>`_  
20 | +  
21 | +.. This comment will be deleted ②
```

Below the diff is a commit form with the following fields:

- Commit message: "This is a commit message" (highlighted with a red box)
- Description: "Description" (highlighted with a blue box)
- Addition: "👤" (highlighted with a red box)
- Commit button: "Commit to main" (highlighted with a red box)

**Add a helpful commit message. Click Commit.**

The screenshot shows the GitHub Desktop application interface. At the top, there are three tabs: "Current Repository" (Data-Mining-22-23), "Current Branch" (main), and "Push origin" (Last fetched 5 minutes ago). The "Changes" tab is selected, showing "0 changed files". The main area displays a message: "No local changes. There are no uncommitted changes in this repository. Here are some friendly suggestions for what to do next." A red box highlights the "Push commits to the origin remote" section, which includes a "Push origin" button. Below this are three other suggestions: "Open the repository in your external editor", "View the files of your repository in Finder", and "Open the repository page on GitHub in your browser". At the bottom left, there's a summary section with a user icon, "Summary (required)", "Description", a plus sign icon, and a "Commit to main" button. At the bottom right, it says "Committed just now" and "This is a commit message" with an "Undo" button.

Pushing to Origin only reflects the changes from your Local to YOUR remote, NOT to the original Upstream repo you forked from.

**Click Push origin to reflect this change to your remote.**

Changes 1 History README.rst

1 changed file README.rst

```
@@ -17,3 +17,5 @@ in class. More resources may be added here throughout the semester:  
17 17 - `Getting Started with GitHub Desktop <https://docs.github.com/en/desktop/installing-and-configuring-github-desktop/overview/getting-started-with-github-desktop>`_  
18 18 - `Git Basics <https://www.freecodecamp.org/news/learn-the-basics-of-git-in-under-10-minutes-d  
a548267cc91/>`_  
19 19 - `Common Git Commands <https://www.freecodecamp.org/news/git-cheat-sheet/>`_  
20 +  
21 +.. This comment will be deleted 04
```

Remember from previous step:

This is a commit message

Description

+ Commit to main

File	Commit Message
notebooks	Lab 2
notebooks_solutions	Lab 2
ppts	add test file for git demo
.gitignore	First commit
LICENSE	First commit
README.rst	This is a commit message

raw.githubusercontent.com/fpontejos/Data-Mining-22-23/main/README.rst

```
=====  
Data Mining - Master Course  
=====  
  
Course taught at Nova IMS to Masters students, Fall semester of the academic  
year 2022/2023.  
  
Additional Materials  
=====  
  
The resources below may help you get started and complement your studies.  
However, they are not part of the course goals and are not necessarily covered  
in class. More resources may be added here throughout the semester:  
  
- `Download Anaconda <https://www.anaconda.com/products/distribution>`_  
- `Python Essentials <https://github.com/joaopfonseca/python-essentials>`_  
- `Getting Started with GitHub Desktop <https://docs.github.com/en/desktop/installing-and-  
desktop>`_  
- `Git Basics <https://www.freecodecamp.org/news/learn-the-basics-of-git-in-under-10-minut  
- `Common Git Commands <https://www.freecodecamp.org/news/git-cheat-sheet/>`_  
.. This comment will be deleted
```

Changes are now also on remote

# Keep up to date with Upstream

 **fpontejos / Data-Mining-22-23** Public

forked from [joaopfonseca/Data-Mining-22-23](#)

[Code](#) [Pull requests](#) [Actions](#) [Projects](#) [Wiki](#) [Security](#) [Insights](#) [Settings](#)

[main](#) [1 branch](#) [0 tags](#) [Go to file](#) [Add file](#) [Code](#)

This branch is [2 commits behind](#) joaopfonseca:main.

[Contribute](#) [Sync fork](#)

 **fpontejos** Add link to git cheat sheet

	notebooks	Lab 1
	notebooks_solutions	Lab 1
	ppts	Lab 1 PPT presentation
	.gitignore	First commit
	LICENSE	First commit
	README.rst	Add link to git cheat sheet

**This branch is out-of-date**  
Update branch to keep this branch up-to-date by syncing 2 commits from the upstream repository.  
[Learn more](#)

[Compare](#) [Update branch](#)

## Sync fork on GitHub

Successfully fetched and fast-forwarded from upstream joaopfonseca:main.

## fponcejos / Data-Mining-22-23 Public

forked from joaopfonseca/Data-Mining-22-23

Pin

Watch 0

Code

Pull requests

Actions

Projects

Wiki

Security

Insights

Settings

main ▾

1 branch

0 tags

Go to file

Add file ▾

Code ▾

This branch is up to date with joaopfonseca/Data-Mining-22-23:main.

Contribute ▾ Sync fork ▾



joaopfonseca Lab 2

1c68e84 22 hours ago 8 commits

	notebooks	Lab 2	22 hours ago
	notebooks_solutions	Lab 2	22 hours ago
	ppts	Fix incorrect hyperlink	4 days ago
	.gitignore	First commit	7 days ago
	LICENSE	First commit	7 days ago
	README.rst	Add link to git cheat sheet	7 days ago

**Remote now up to date with Upstream**

The screenshot shows two GitHub Desktop windows side-by-side. The top window displays a pull request titled "Pull origin" with the status "Last fetched just now". The bottom window shows the diff view for the README.rst file, indicating changes from line 17 to 21. A pink box highlights the status bar in both windows.

Current Repository Data-Mining-22-23

Current Branch main

Fetching upstream Hang on...

Changes 1 History README.rst

1 changed file

README.rst

@@ -17,3 +17,5 @@ in class. More resources may be added here throughout the semester:

- `Getting Started with GitHub Desktop <<https://docs.github.com/en/desktop/installing-and-configuring-github-desktop/overview/getting-started-with-github-desktop>>`\_

- `Git Basics <<https://www.freecodecamp.org/news/learn-the-basics-of-git-in-under-10-minutes-daa548267cc91/>>`\_

- `Common Git Commands <<https://www.freecodecamp.org/news/git-cheat-sheet/>>`\_

.. This comment will be deleted

Current Repository Data-Mining-22-23

Current Branch main

Pull origin Last fetched just now

Changes 1 History README.rst

1 changed file

README.rst

@@ -17,3 +17,5 @@ in class. More resources may be added here throughout the semester:

- `Getting Started with GitHub Desktop <<https://docs.github.com/en/desktop/installing-and-configuring-github-desktop/overview/getting-started-with-github-desktop>>`\_

- `Git Basics <<https://www.freecodecamp.org/news/learn-the-basics-of-git-in-under-10-minutes-daa548267cc91/>>`\_

- `Common Git Commands <<https://www.freecodecamp.org/news/git-cheat-sheet/>>`\_

+  
+.. This comment will be deleted

Update README.rst

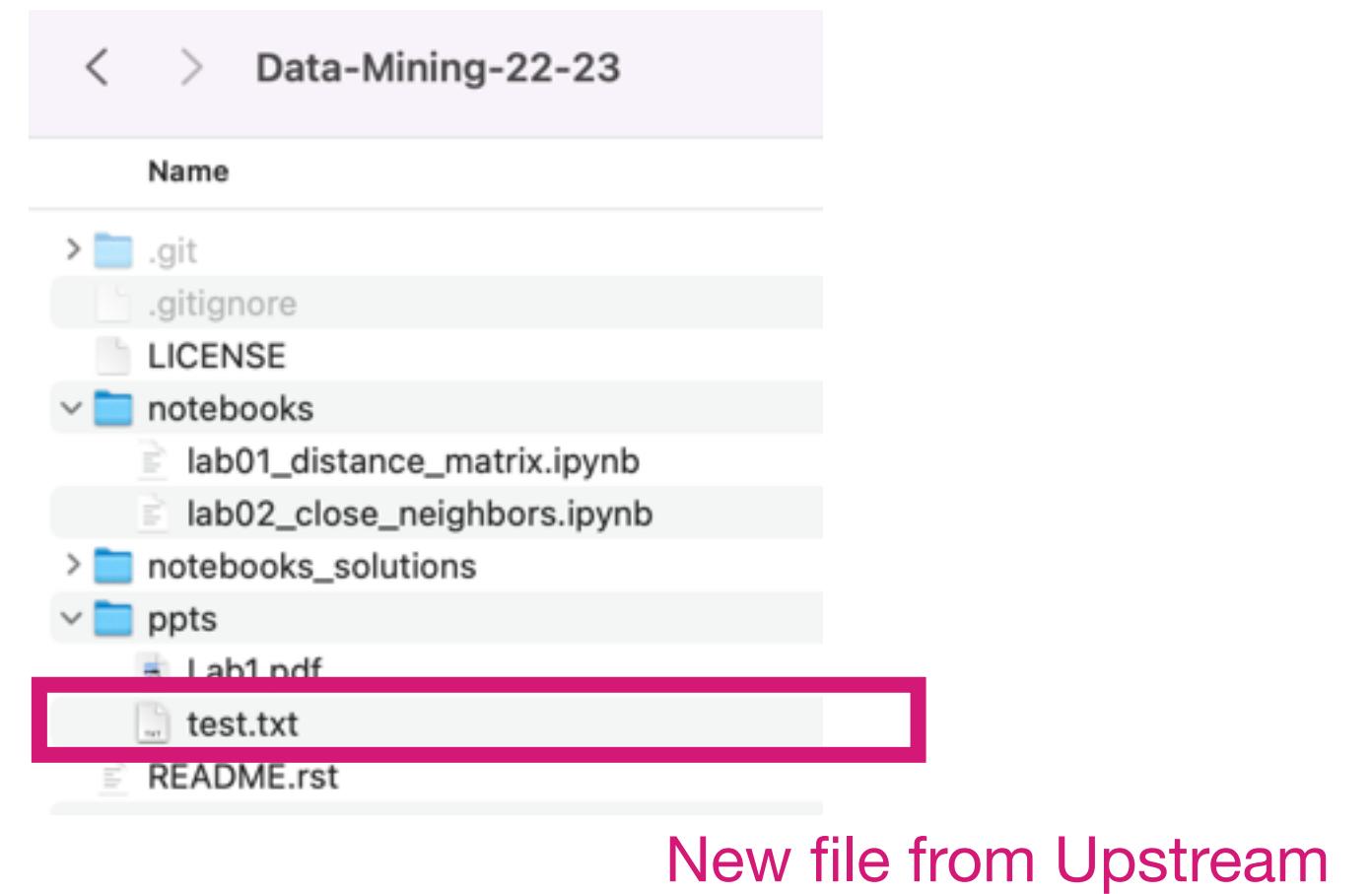
Description

Commit to main

Update README.rst

Description

Commit to main



Pull changes from Remote to Local

**Additional use cases  
may be added**









