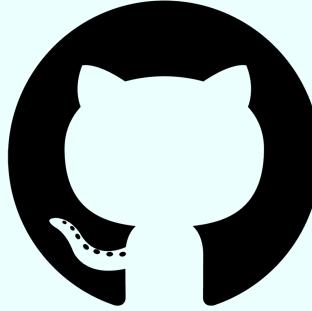


Git : Part 3

Collaborate on GitHub



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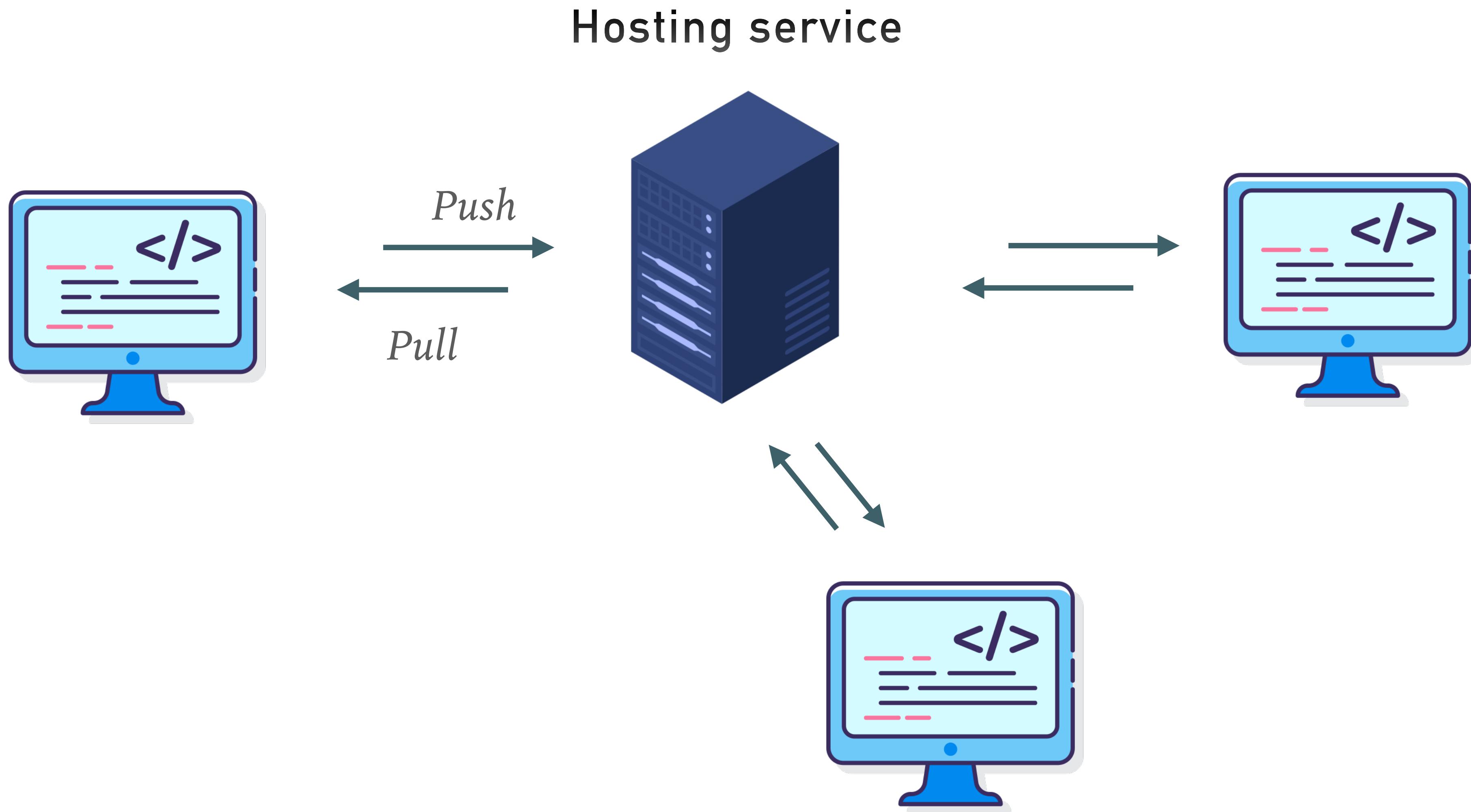
What is Github ?



- ◆ Web hosting service that hosts git projects on the cloud
- ◆ A platform for hosting and collaborating on Git repositories
- ◆ The most used ones are : Github, bitbucket and gitlab.
- ◆ **Github** is the most popular one, it was bought by Microsoft in 2018



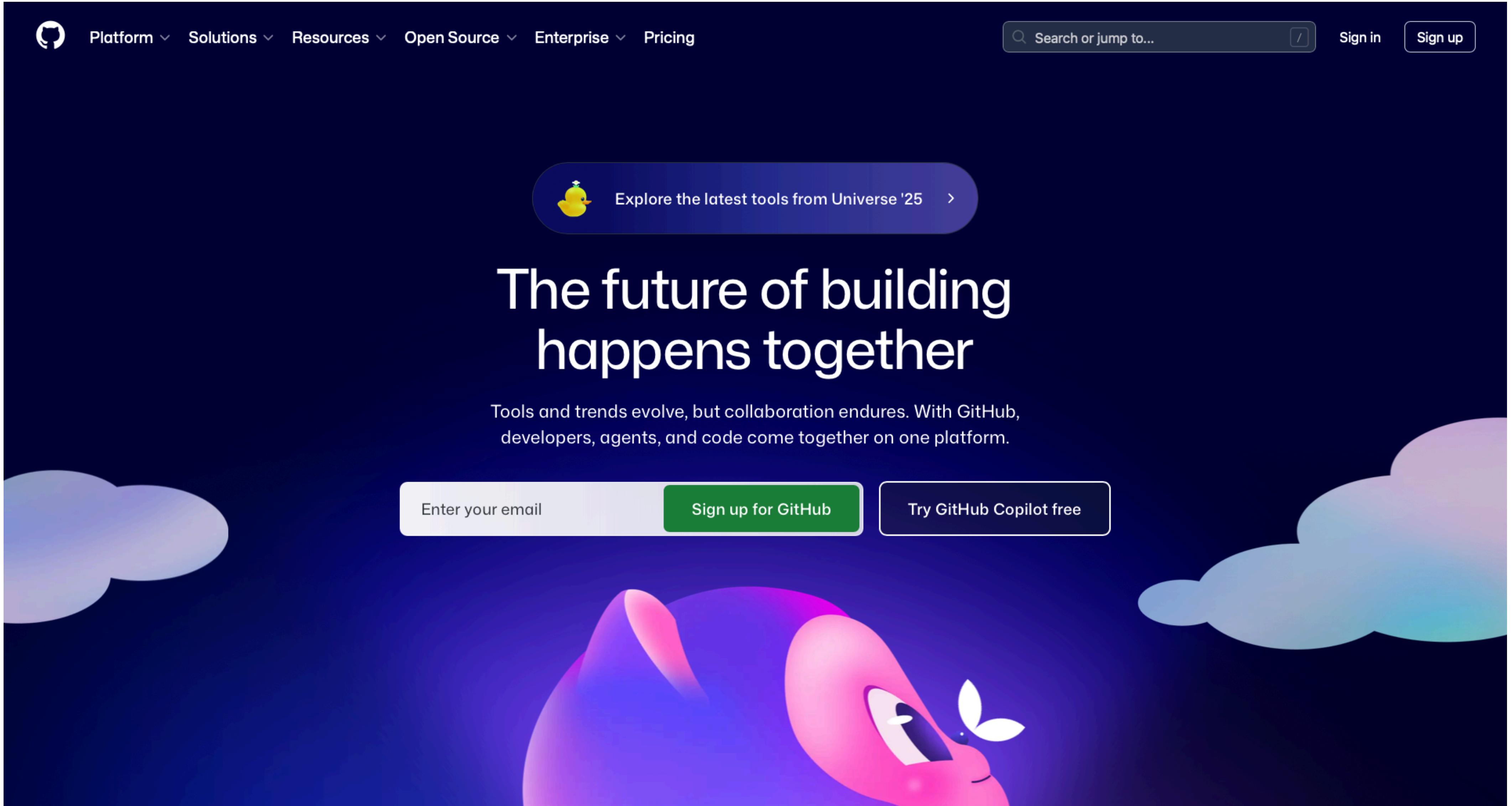
What is Github ?



GITHUB SETUP



Sign up to GitHub



The image shows the GitHub sign-up landing page. At the top, there is a navigation bar with links for Platform, Solutions, Resources, Open Source, Enterprise, and Pricing. To the right of the navigation is a search bar with the placeholder "Search or jump to..." and a "Sign in" button. Below the search bar is a "Sign up" button. A blue call-to-action button features a yellow chick icon and the text "Explore the latest tools from Universe '25". The main headline reads "The future of building happens together" in large white text. Below the headline, a subtext states: "Tools and trends evolve, but collaboration endures. With GitHub, developers, agents, and code come together on one platform." At the bottom, there is a form with fields for "Enter your email" and "Sign up for GitHub", along with a "Try GitHub Copilot free" button. The background features abstract, colorful cloud-like shapes in shades of purple, pink, and blue.

Create a 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](#).

Owner * **Repository name ***

 AmineFrj / my-repo 

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

Description (optional)

My first repo

 **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:

Skip this step if you're importing an existing repository.

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

Add .gitignore

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

.gitignore template: Python

Choose a license

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

License: None

 You are creating a public repository in your personal account.

Create repository



Initial setup

Quick setup — if you've done this kind of thing before

[Set up in Desktop](#) or [HTTPS](#) [SSH](#) <https://github.com/AmineFrj/my-repo.git> [Copy](#)

Get started by [creating a new file](#) or [uploading an existing file](#). We recommend every repository include a [README](#), [LICENSE](#), and [.gitignore](#).

...or create a new repository on the command line

```
echo "# my-repo" >> README.md  
git init  
git add README.md  
git commit -m "first commit"  
git branch -M main  
git remote add origin https://github.com/AmineFrj/my-repo.git  
git push -u origin main
```

...or push an existing repository from the command line

```
git remote add origin https://github.com/AmineFrj/my-repo.git  
git branch -M main  
git push -u origin main
```

...or import code from another repository

You can initialize this repository with code from a Subversion, Mercurial, or TFS project.

[Import code](#)

💡 **ProTip!** Use the URL for this page when adding GitHub as a remote.



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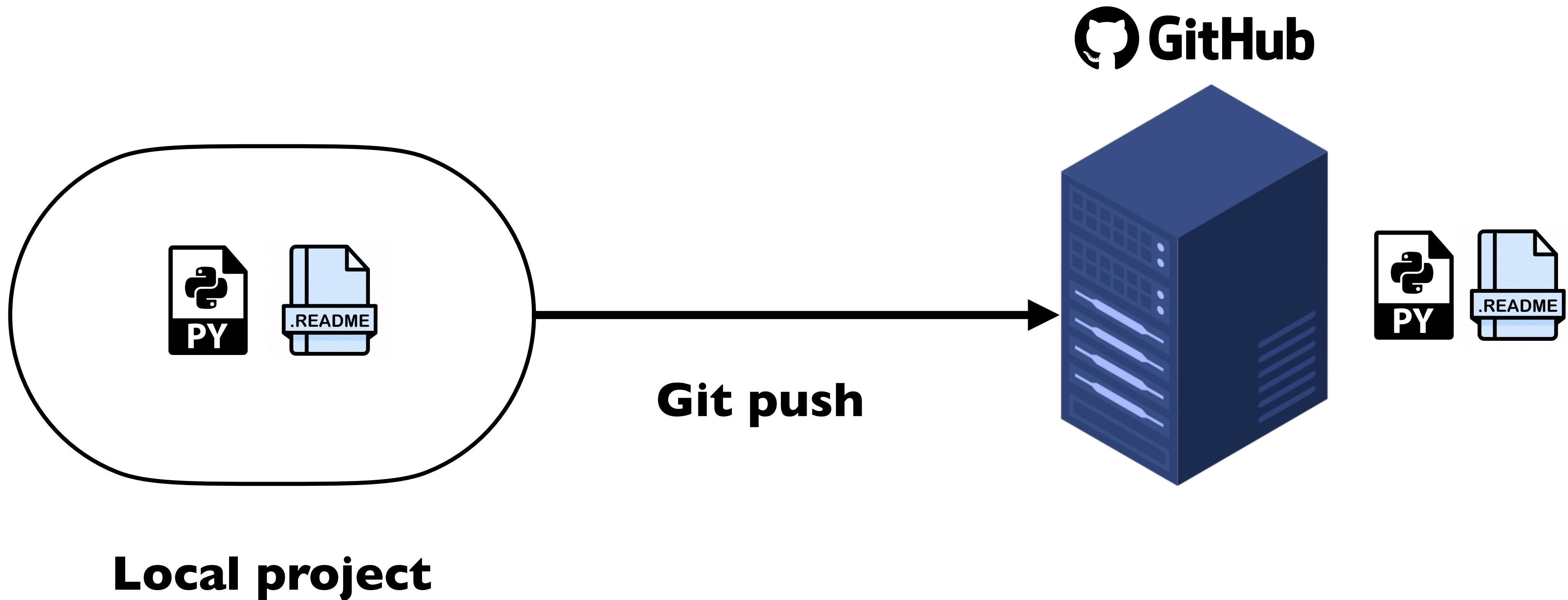
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What is a push

Git push sends projects into repository in the cloud



Setup ssh key

- ◆ Since august 2021 GitHub password authentication has been removed and replaced by ssh keys, so you don't have to enter your password multiple times.

```
[macbook-pro-de-amine:hello git amine$ git push -u origin main
Username for 'https://github.com': AmineFrj
Password for 'https://AmineFrj@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/AmineFrj/my-repo.git/'
```

Configure SSH keys

The screenshot shows a GitHub repository setup page for a public repository named "AmineFrj/my-repo". The user is signed in as "AmineFrj". A red arrow points from the bottom right towards the "Settings" link in the user menu on the right side of the page.

Quick setup — if you've done this kind of thing before

Set up in Desktop or HTTPS SSH <https://github.com/AmineFrj/my-repo.git>

Get started by [creating a new file](#) or [uploading an existing file](#). We recommend every repository include a [README](#), [LICENSE](#), and [.gitignore](#).

...or create a new repository on the command line

```
echo "# my-repo" >> README.md
git init
git add README.md
git commit -m "first commit"
git branch -M main
git remote add origin https://github.com/AmineFrj/my-repo.git
git push -u origin main
```

...or push an existing repository from the command line

```
git remote add origin https://github.com/AmineFrj/my-repo.git
git branch -M main
git push -u origin main
```

...or import code from another repository

You can initialize this repository with code from a Subversion, Mercurial, or TFS project.

[Import code](#)

💡 **ProTip!** Use the URL for this page when adding GitHub as a remote.

Configure SSH keys

The screenshot shows the GitHub user profile settings page for 'Amine Ferdjaoui'. The left sidebar contains navigation links for Public profile, Account, Appearance, Accessibility, Notifications, Access, Billing and plans, Emails, Password and authentication, Sessions, SSH and GPG keys (which is selected and highlighted with a red arrow), Organizations, and Moderation. The main content area displays sections for SSH keys, GPG keys, and Vigilant mode. The 'SSH keys' section indicates there are no SSH keys associated with the account, with a link to generate them. The 'GPG keys' section indicates there are no GPG keys associated with the account, with a link to generate them. The 'Vigilant mode' section contains a checkbox for 'Flag unsigned commits as unverified'.

SSH keys

New SSH key

There are no SSH keys associated with your account.

Check out our guide to [generating SSH keys](#) or troubleshoot [common SSH problems](#).

GPG keys

New GPG key

There are no GPG keys associated with your account.

Learn how to [generate a GPG key](#) and add it to your account.

Vigilant mode

Flag unsigned commits as unverified

This will include any commit attributed to your account but not signed with your GPG or S/MIME key.

Note that this will include your existing unsigned commits.

[Learn about vigilant mode.](#)

Setup ssh key

- ◆ First check if you have no SSH keys on your computer

```
$ ls -al ~/.ssh
```

- ◆ SSH keys supported by GitHub are :
 - ◆ id_rsa.pub
 - ◆ id_ecdsa.pub
 - ◆ id_ed25519.pub
- ◆ If you already have one just copy it into your GitHub settings, otherwise follow the instructions : <https://docs.github.com/en/authentication/connecting-to-github-with-ssh/generating-a-new-ssh-key-and-adding-it-to-the-ssh-agent>

Setup multiple ssh keys

- ◆ If you have multiple accounts, make sure to add specific key for each one in `~/.ssh/config`
then add ssh private keys to your agent with : `ssh-add ~/.ssh/<key-name>`
- ◆ Cf. <https://gist.github.com/oanhnn/80a89405ab9023894df7>

Initial push

```
$ git remote add origin git@<repo_url>
$ git branch -M main
$ git push -u origin main
```

Nb. Use the **ssh url** in *git remote add origin*

```
$ echo "This repo is a python test on GitHub" > README.md
$ git add README.md
$ git commit -m 'Add a README.'
$ git push
```

Initial push

The screenshot shows a GitHub repository page for 'AmineFrj/my-repo'. The 'Code' tab is selected. A red arrow points to the '7 commits' link in the commit list.

AmineFrj / my-repo Public

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

main 1 branch 0 tags Go to file Add file Code

AmineFrj Add README. 912ffa1 4 minutes ago 7 commits

README.md Add README. 4 minutes ago

main2.py add new comment 2 4 hours ago

requirements.txt Add new print 9 hours ago

README.md

My readme

About

No description, website, or topics provided.

Readme 0 stars 1 watching 0 forks

Releases

No releases published Create a new release

Packages

No packages published Publish your first package

Languages

Python 100.0%

Initial push

The screenshot shows a GitHub repository page for 'AmineFrj / my-repo'. The 'Code' tab is selected. The commit history is displayed under the 'main' branch. There are two main sections: 'Commits on Nov 28, 2022' and 'Commits on Nov 27, 2022'. Each commit includes the author (AmineFrj), date, message, copy icon, commit hash, and diff icon.

- Commits on Nov 28, 2022:**
 - Add README.
AmineFrj committed 4 minutes ago
 - add new comment 2
AmineFrj committed 4 hours ago
 - added comment
AmineFrj committed 4 hours ago
 - Rename main.py
AmineFrj committed 9 hours ago
 - add readme
AmineFrj committed 9 hours ago
 - Add new print
AmineFrj committed 9 hours ago
- Commits on Nov 27, 2022:**
 - Initial commit.
AmineFrj committed yesterday

At the bottom, there are 'Newer' and 'Older' buttons.

Clone project

- Once you pushed the initial commit, you can clone it using this clone command

```
$ git clone <repo_url>
```

- You can see that git added the remote branches under origin

```
$ git branch -a
```

Git visualization

<https://git-school.github.io/visualizing-git/>

