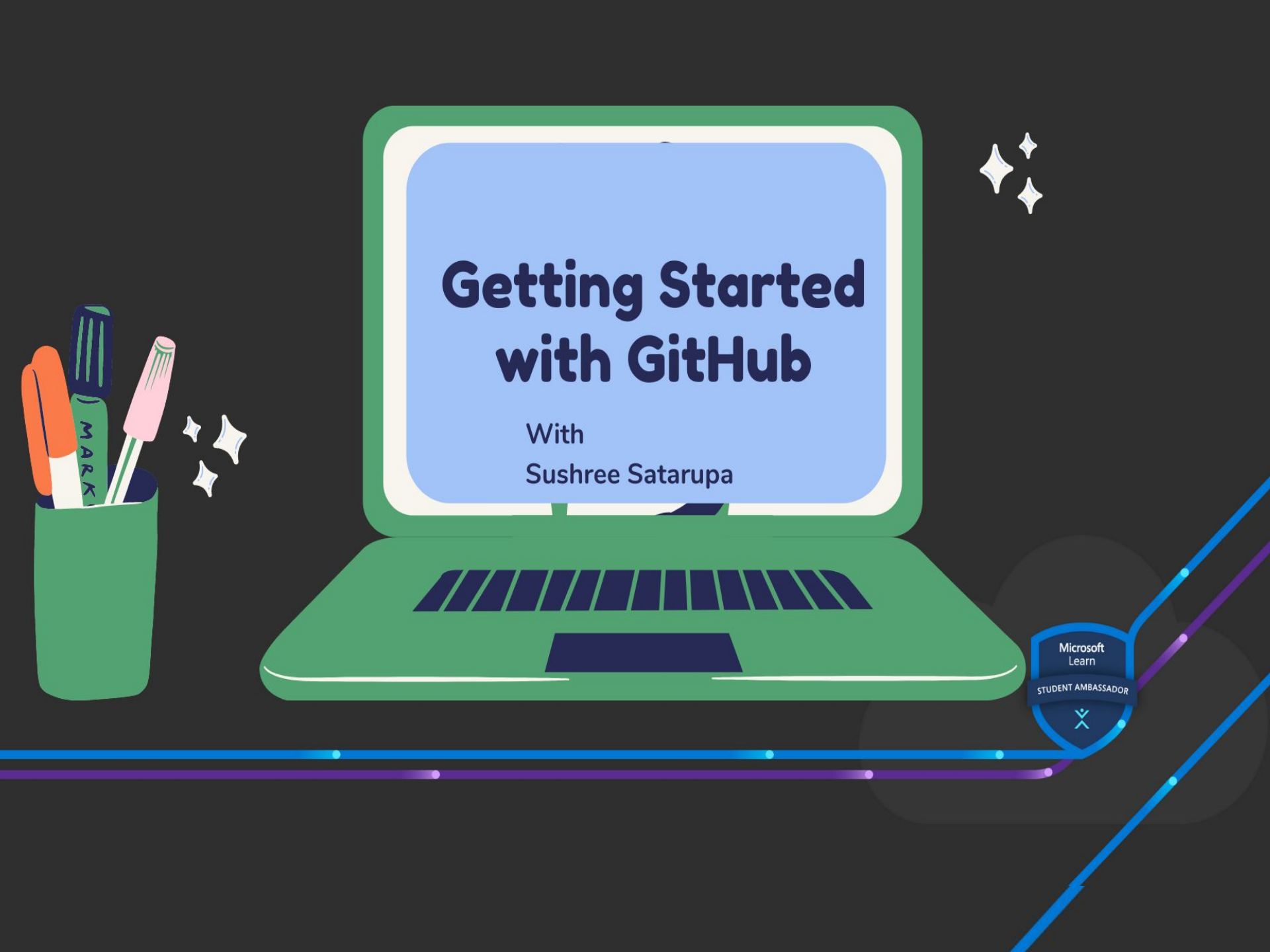
Getting Started with GitHub
With
Sushree Satarupa
MARK
Microsoft Learn
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Welcome! My name is Sushree Satarupa

1. I'm here to lead this session & help you learn something new today!
2. I'm a CSE pre final year student at NIT Rourkela.
3. I'm the founder of SHECODERS and one of the MLSAs

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What will you learn today?

1. The basics of GitHub
2. The GitHub Workflow

How Will You Build It?

1. Make an account on GitHub.
2. Fork the repo that I created.
3. Add a txt file naming it with your roll number and add some details about yourself inside the file.
4. And make a pull request.
5. The workshop organizer will approve and merge pull requests.
6. Refresh the main repository to see people's files being added!

Now that you understand how it works, let's get started!

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1. Introduction to Git and GitHub
2. GitHub Collaboration WorkFlow

We're all going to collaborate on a project together.

How?

Version control!

Git vs. GitHub

What's the difference?

Git

- Git is a version control system.
- It can be used with various tools or locally on your computer to help you keep track of changes in your code projects.
- Think of it like Google Docs for code, but better.

GitHub

- GitHub is a platform for code collaboration!
- GitHub uses Git for version control and provides you all sorts of awesome collaboration tools.

Why version control?

Because emailing a file around is painful

Version control features:

- Log changes in a searchable way, instead of renaming a file for each version.

- Collaborators can work in parallel and merge their changes automatically, instead of manually comparing the differences between a file

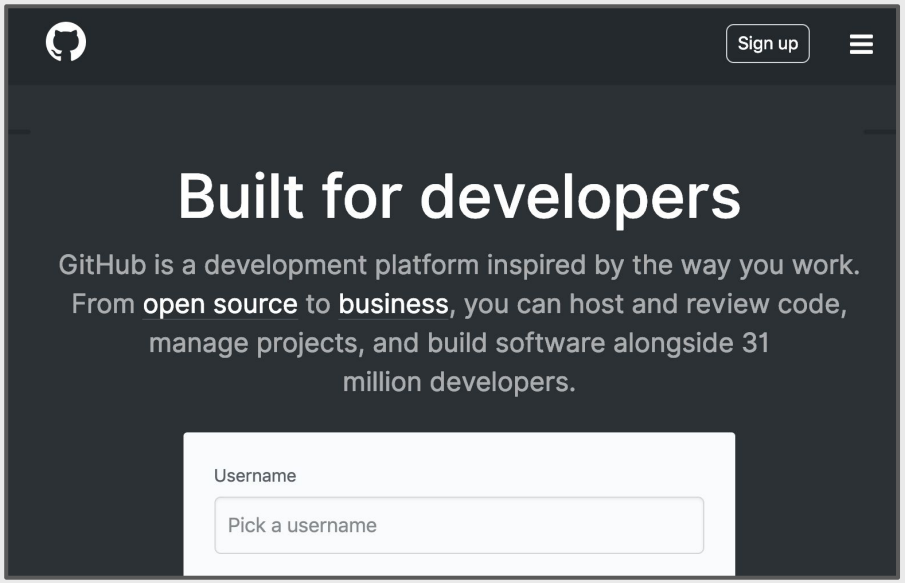
*Graphics taken from the Software Carpentry Git Lesson**

Let's make an account!

Visit the URL on the left if you're a student and on the right if you are not. Follow the instructions on GitHub.com to make your account!

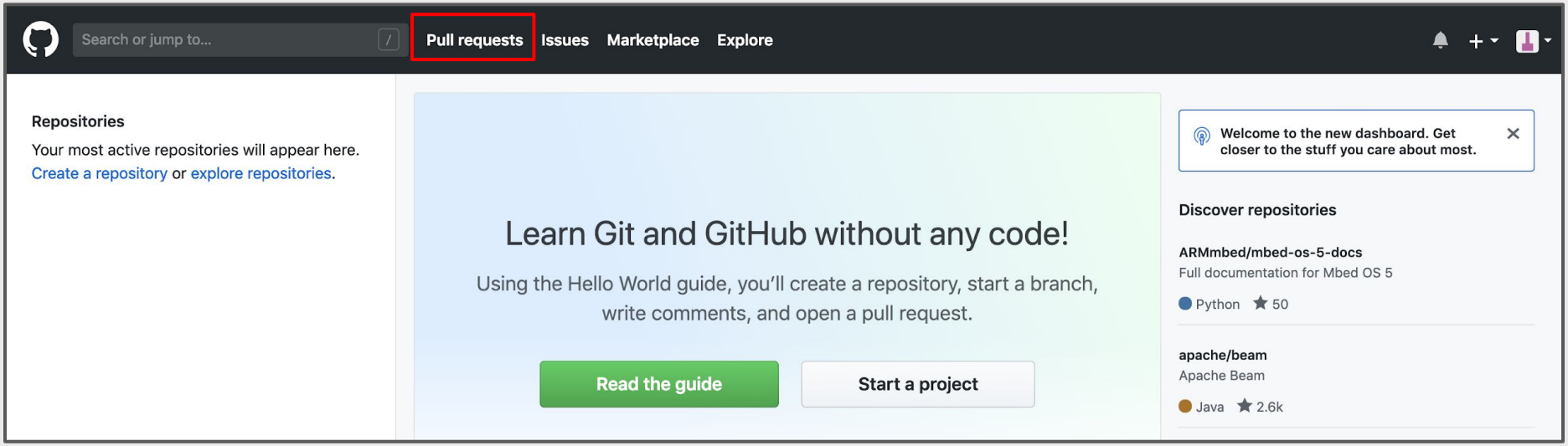
http://mlhlocal.host/github-edu

http://mlhlocal.host/github-signup



Explore GitHub

The GitHub platform provides numerous features for collaboration.



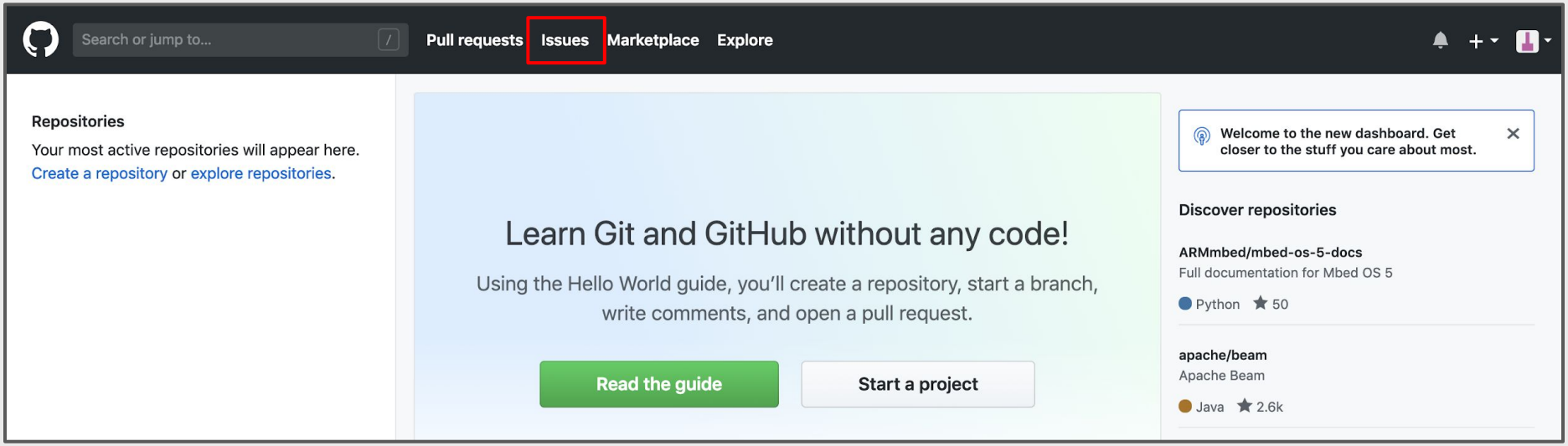
Next to the search bar, you can select Pull requests. This will show you your own pull requests against other people's repos.

Key Term

pull request: a way to ask to make changes to someone else's code by submitting your own changes for their review

Explore GitHub

The GitHub platform provides numerous features for collaboration.



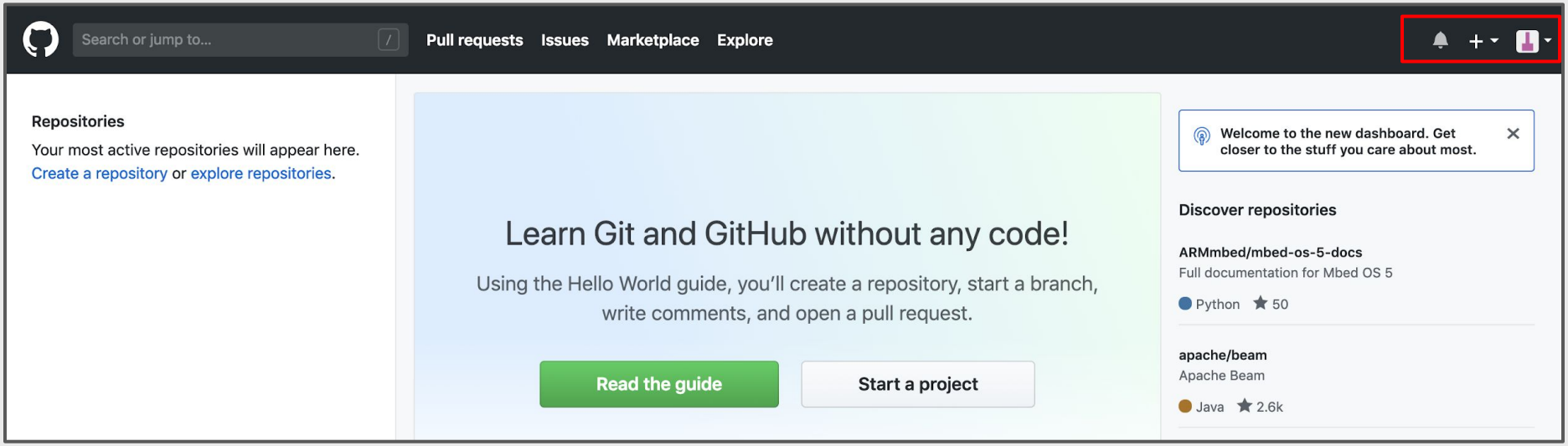
Next to pull requests, you can see any issues you've opened or worked on.

Key Term

issues: a way to share a problem about someone else's code, without necessarily submitting your own solution

Explore GitHub

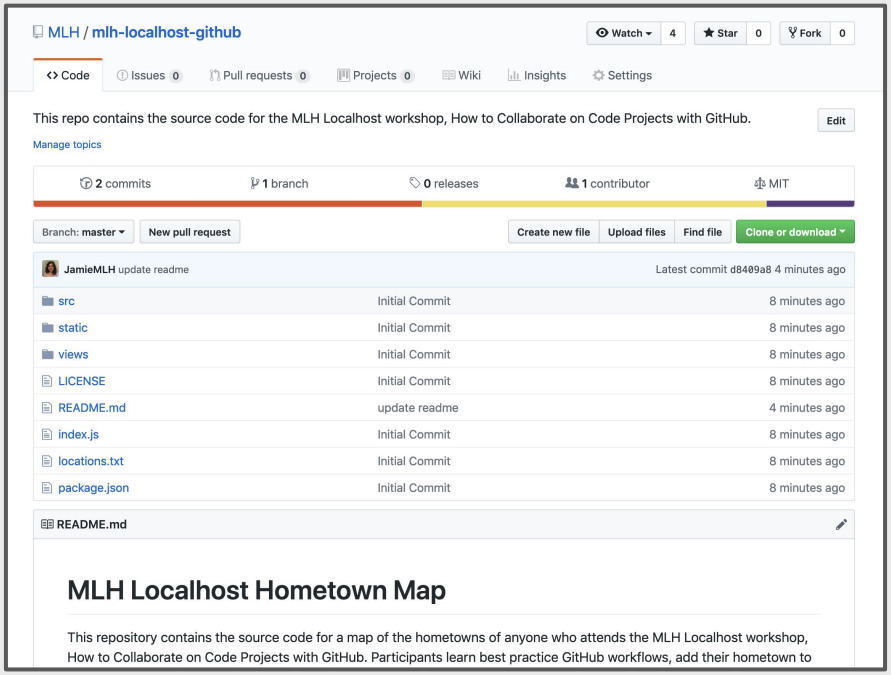
The GitHub platform provides numerous features for collaboration.



- In the upper right hand corner, you can see any notifications you have received.
- The + symbol allows you to create a new project.
- Clicking your avatar opens the settings menu.

Explore a Repository

Navigate to the URL below and let's check out the repository for the map!



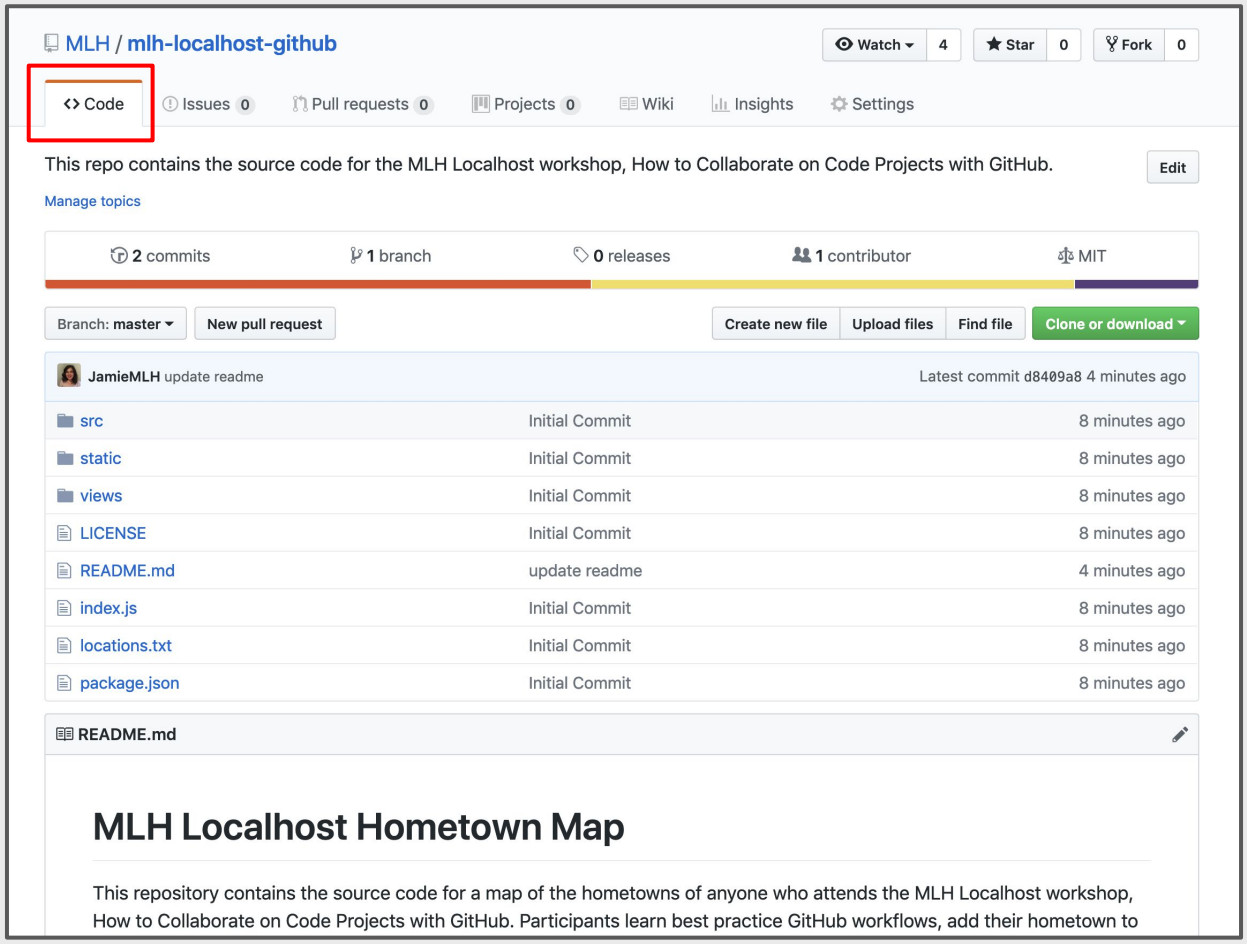
http://mlhlocal.host/github-code

Key Term

repository: think of this like a project folder where code is stored!

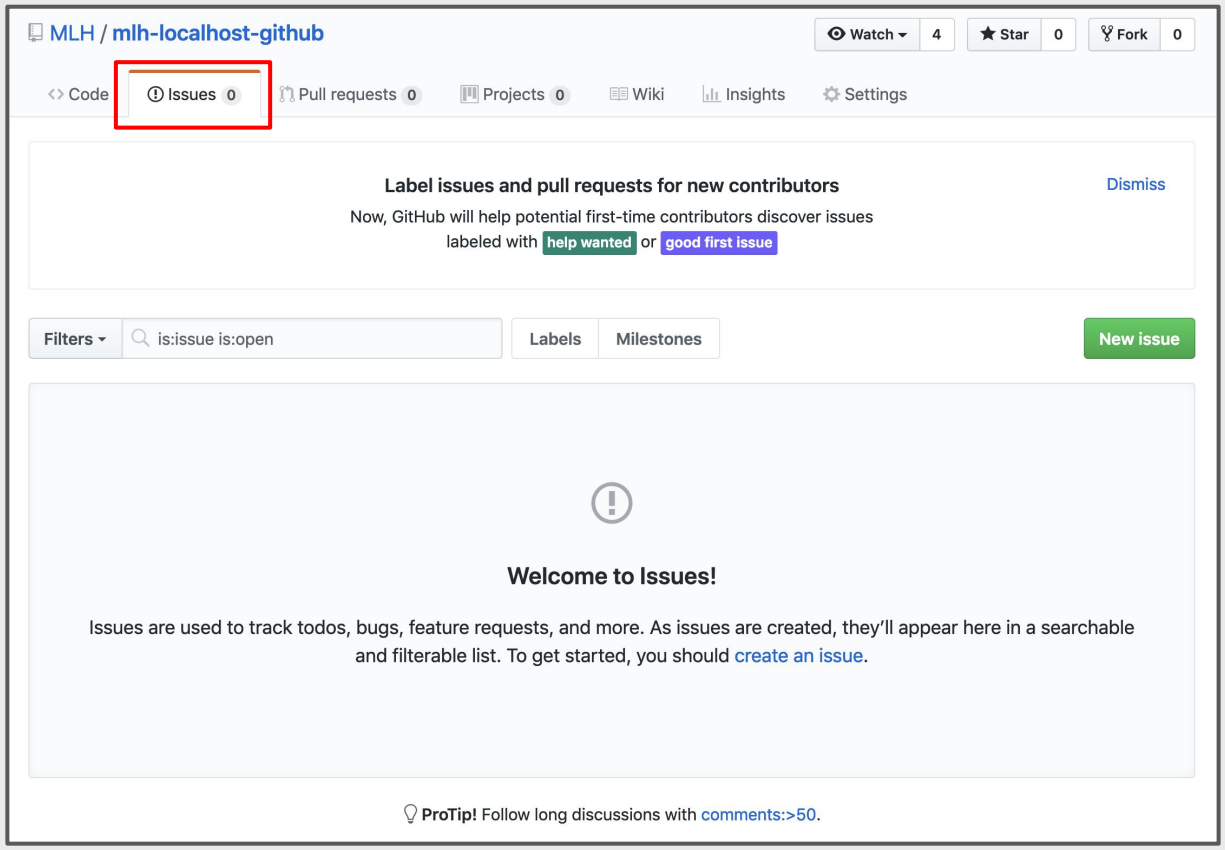
Explore a Repository

The first tab in a repository is the **Code** tab. It shows the code in the project.



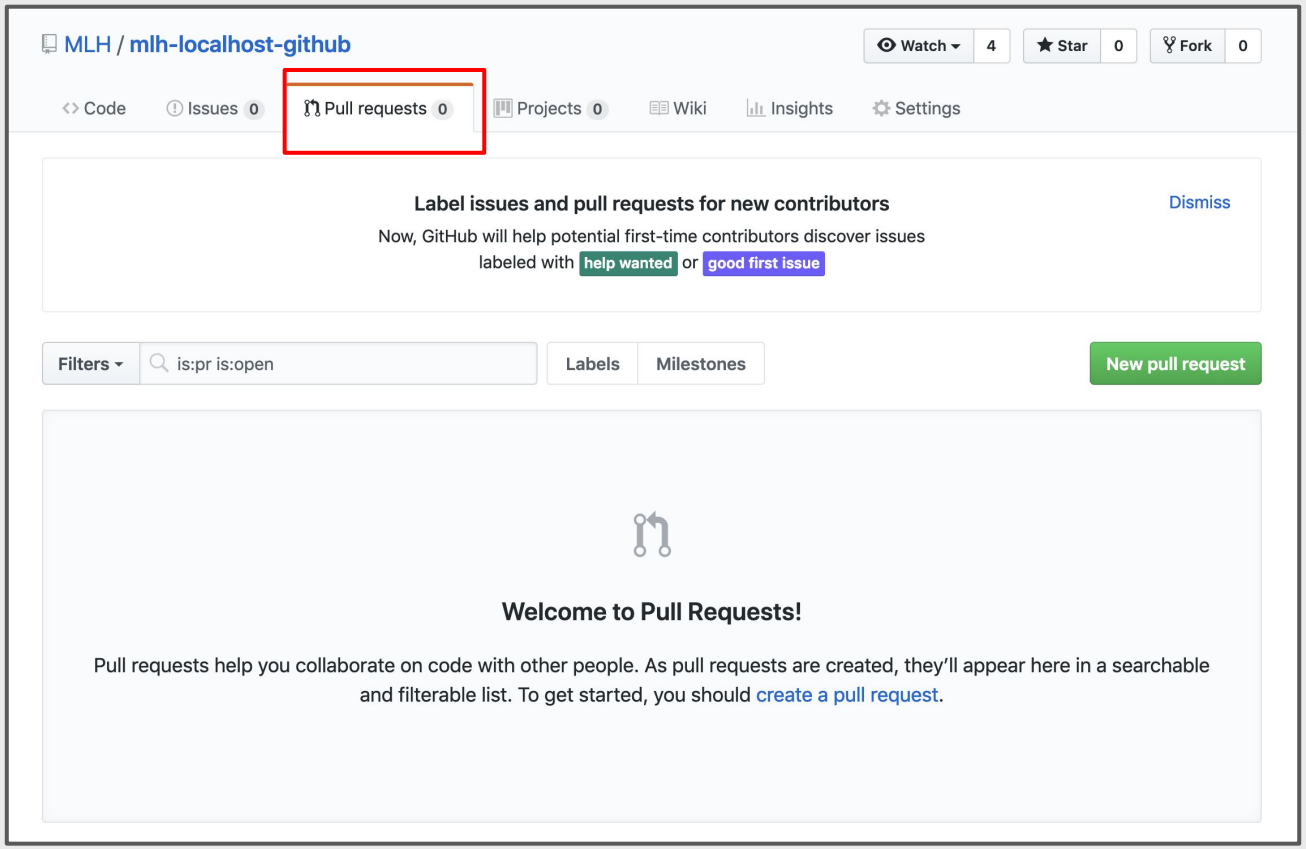
Explore a Repository

The second tab is the **Issues** tab. If there is a problem with the code in someone's project, you can open an Issue and let them know about it. Pro-tip: You should always follow the project maintainer's instructions for opening an issue.



Explore a Repository

The third tab is the **Pull Requests** tab. If you want to contribute code to someone's repository, you'll open a Pull Request. You'll do that today!



There is a lot of terminology regarding Git and GitHub. Let's get started!

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1. Introduction to Git and GitHub
2. GitHub Collaboration WorkFlow

Developer Workflow

You're going to practice a typical best practice developer workflow.

First, you'll **fork** someone else's code. This means creating your own copy of it.

Key Terms

fork: your own copy of someone else's repository.

Developer Workflow

1. When you're happy with changes, you'll **commit** them.
2. If you want to add your code to someone else's project, you'll open a **pull request**.
3. If they approve it, they'll **merge** your branch into their master branch.

Key Terms
commit: a group of revisions you want to officially add to your branch
merge: to officially add the changes from your branch into the master branch (or another branch)

Great! That's it. That's how you work with Git. Let's try it using GitHub!

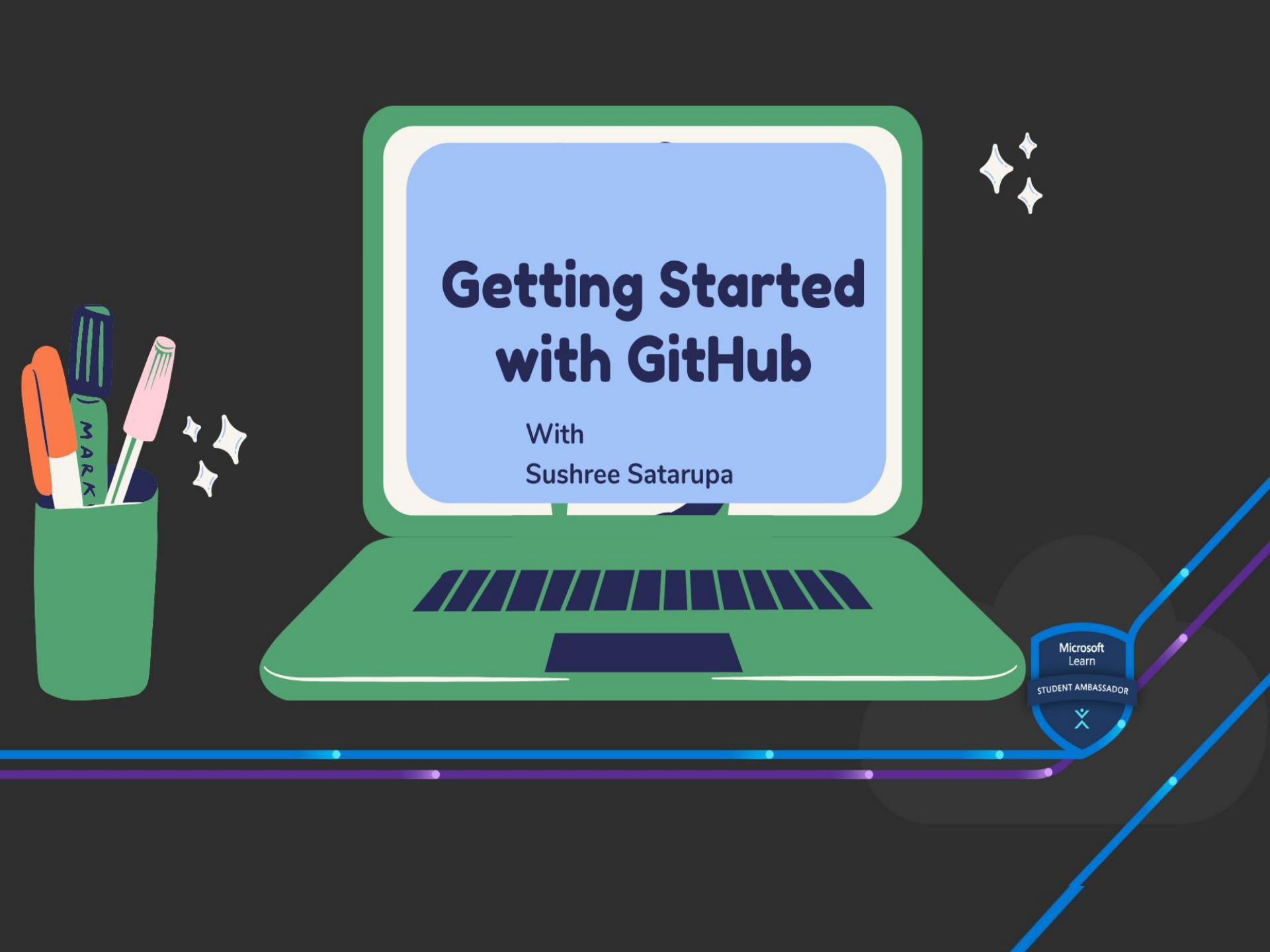
Amazing! Now you know how to work with GitHub in the browser.

GitHub

Let's recap quickly...

1. Git is a version control system allowing multiple people to collaborate

2. GitHub adds features to Git and provides a web interface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