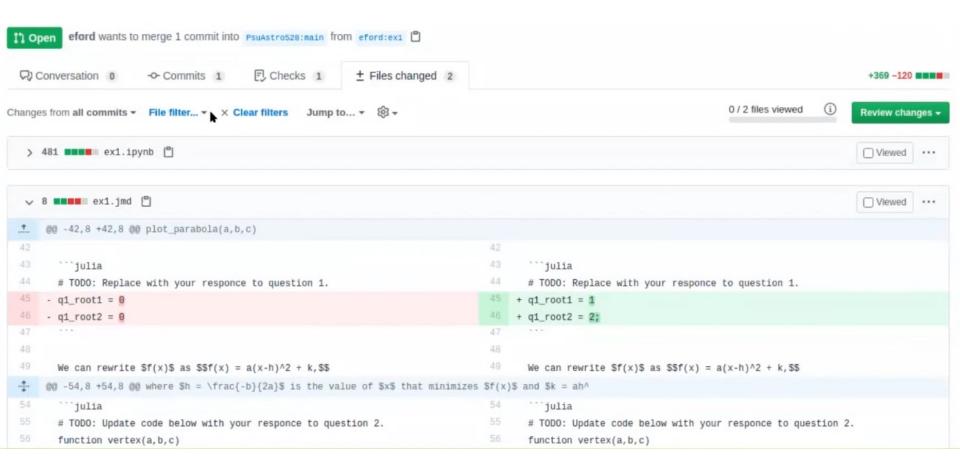
- Git is an open source version control language, developed in 2005.
- GitHub is a cloud-based hosting service that lets you manage Git repositories
  - Extremely widely used in the industry
  - Similar to Dropbox, OneDrive, but is more sophisticated for collaborative work: version control

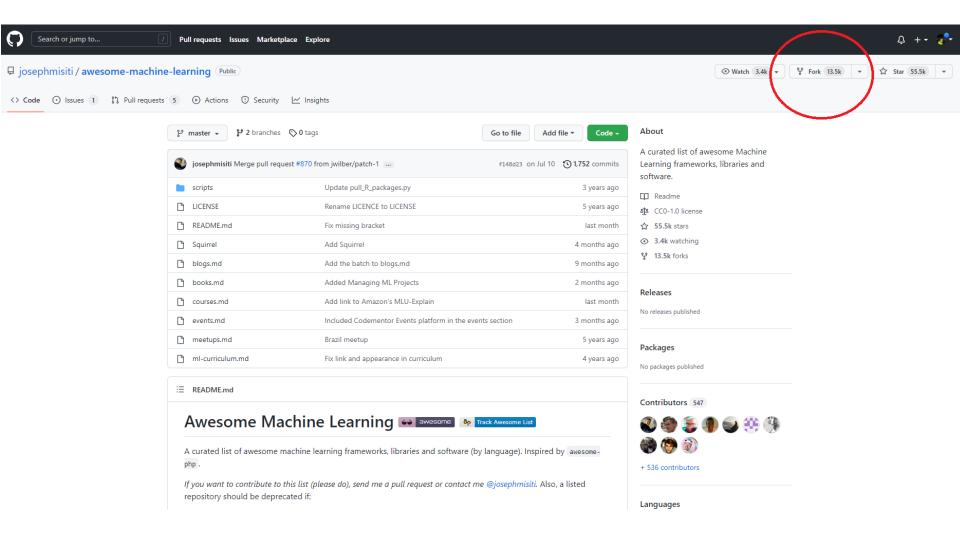
- The files are stored in a "repository", or "repo" that are simply folders containing the files for a project.
- Suppose you want to contribute to the TheGreatestApp repo.
  - You first "fork" the repo, which is a way to "clone" the original repo files, which creates an identical repo under your account's name.

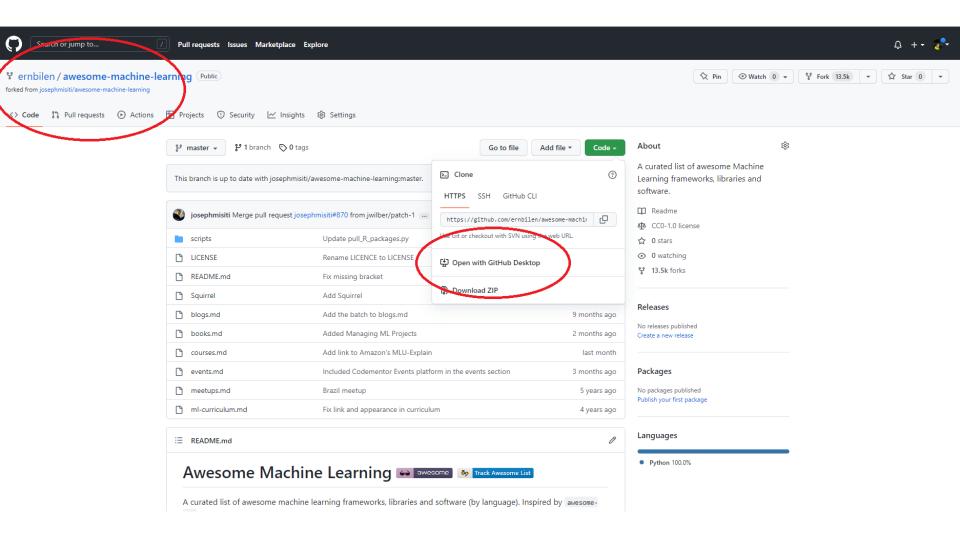
- You work on your great idea to improve the app locally, and edit the files in your clone repo.
- Once you are done, you first "commit" your changes.
  - Committing basically is a manual way of overwriting files.
- Then you push your changes to your clone repo such that the files are modified and uploaded.

- Note that nothing has happened to the original repo so far.
- You finally send a "pull request" to the owner of the original repo.
  - A pull request automatically shows the account owner what changes you have made in a nice intuitive side-by-side window.
  - You can add a message at this stage and communicate.

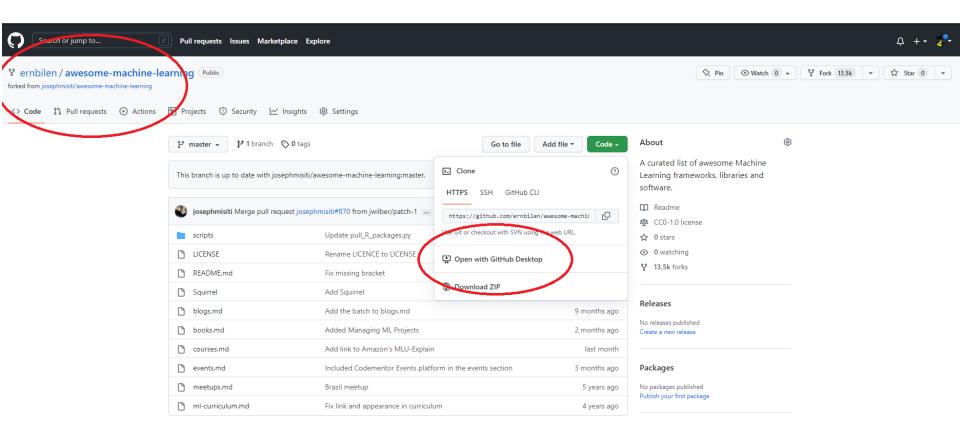


- After setting your own local repo via "fork"
  - commit
  - push
  - pull request

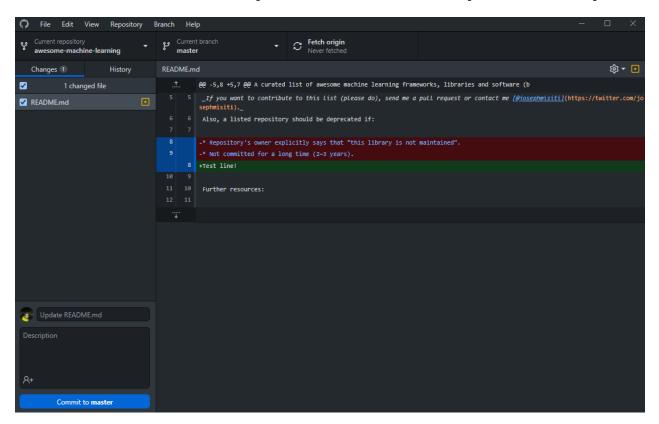




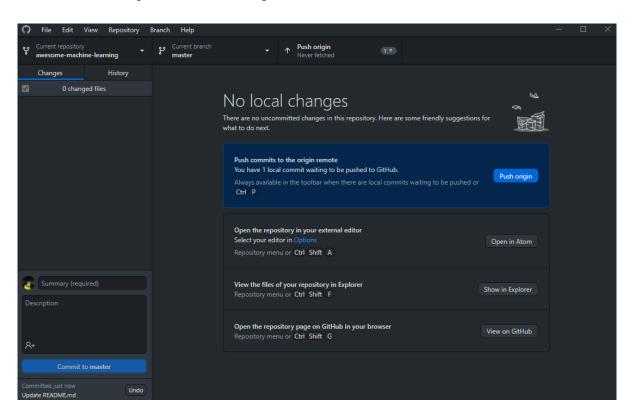
 You can use browser, GitHub Desktop App, or command line to interact with your repo



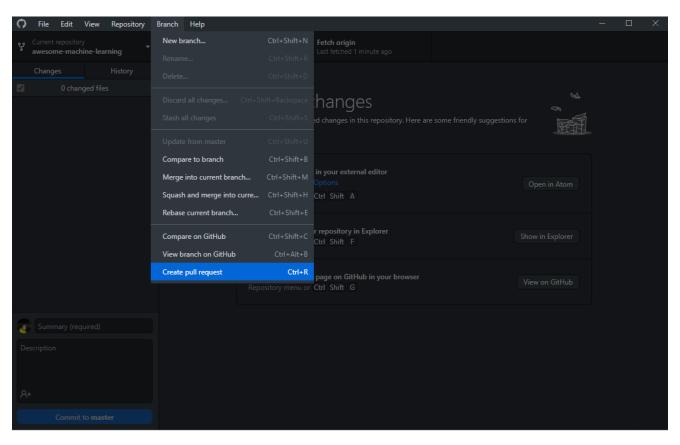
 Edits will be displayed on the interface, after which you can press "commit to master", i.e. to your local repository.



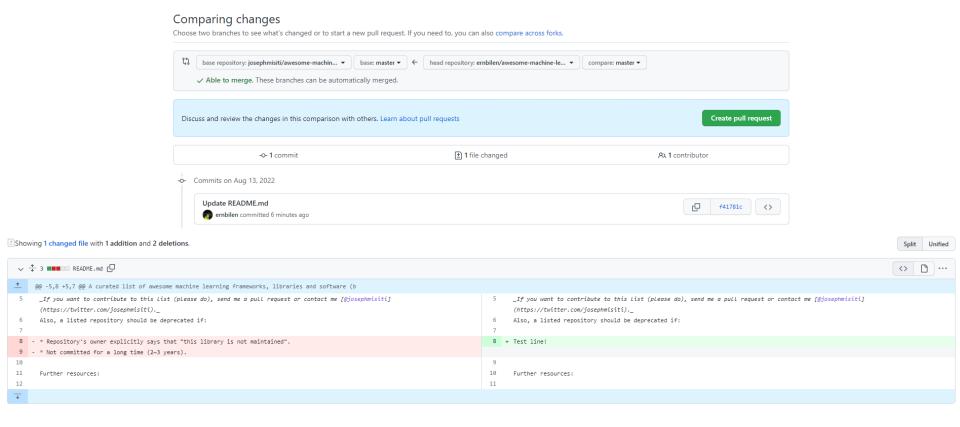
 You are now ready to "push commits to the origin remote", this time to your "cloud" repository.



 To send your changes to the owner of the original repo, click on "create pull request".



 You can write a comment and explain your reasoning in updating the code on this screen.



#### Git & Github: command line

- After setting your own local repo via "fork" or "clone"
  - add files (only for command line) >git add --all
  - commit >git commit -m "descriptive message"
    - You can run >git status to check what files are changed
  - push >git push
  - pull request >git pull

#### For more git commands:

https://about.gitlab.com/images/press/git-cheat-sheet.pdf

### Github Classroom

- We will use Github Classroom to make things more efficient and easier. (free service)
- After setting your own local repo via "fork" or "clone"
  - You will receive an invitation email for each assignment.
  - Accepting the invitation automatically forks my repo and creates your own local clone repo.
  - You can work on your assignment in your local repo, do any edits.

### Github Classroom

- Once you have your local repo, you can use the Github Desktop app, or any browser to upload your assignment via
  - commit
  - push
  - pull request: Also automated. Once you push your files to your local repo, everything gets delivered automatically.

## We are done! Any questions?









#### We are done! Any questions?



I contribute to open source projects on GitHub

Professional README writer