GitHub Tutorial

Congyi Zeng

1: Create an account

Go to https://github.com/

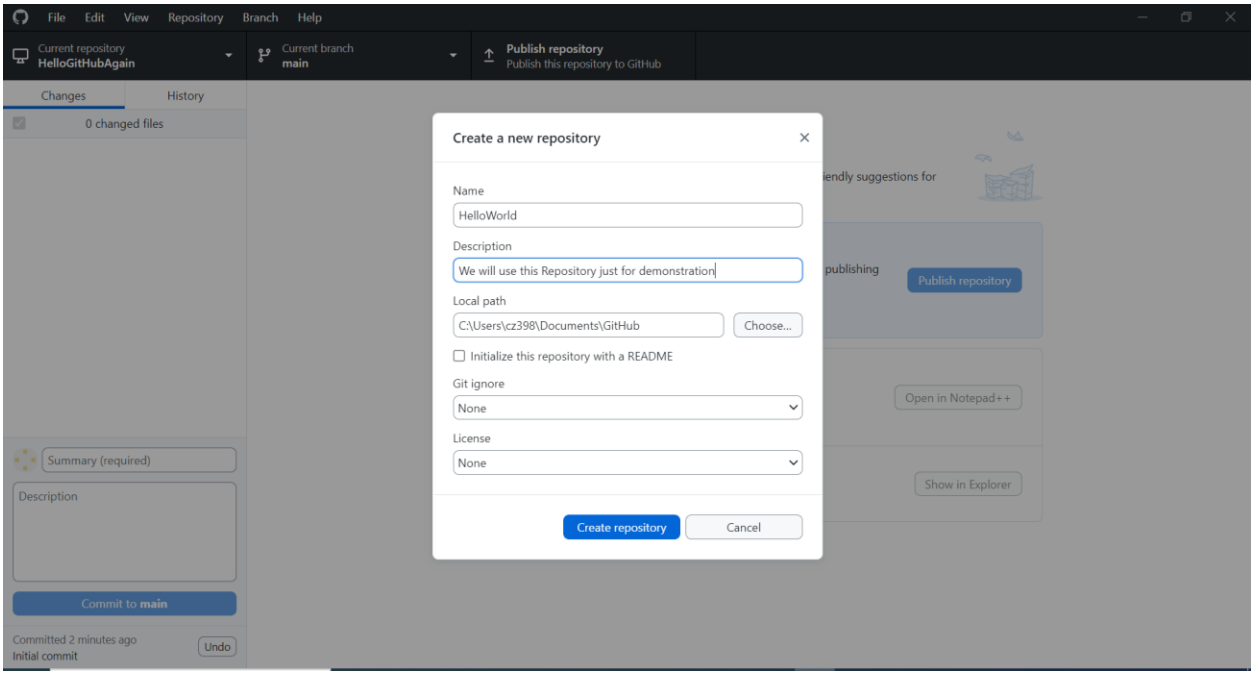
2: Download GitHub Desktop

Go to https://desktop.github.com/

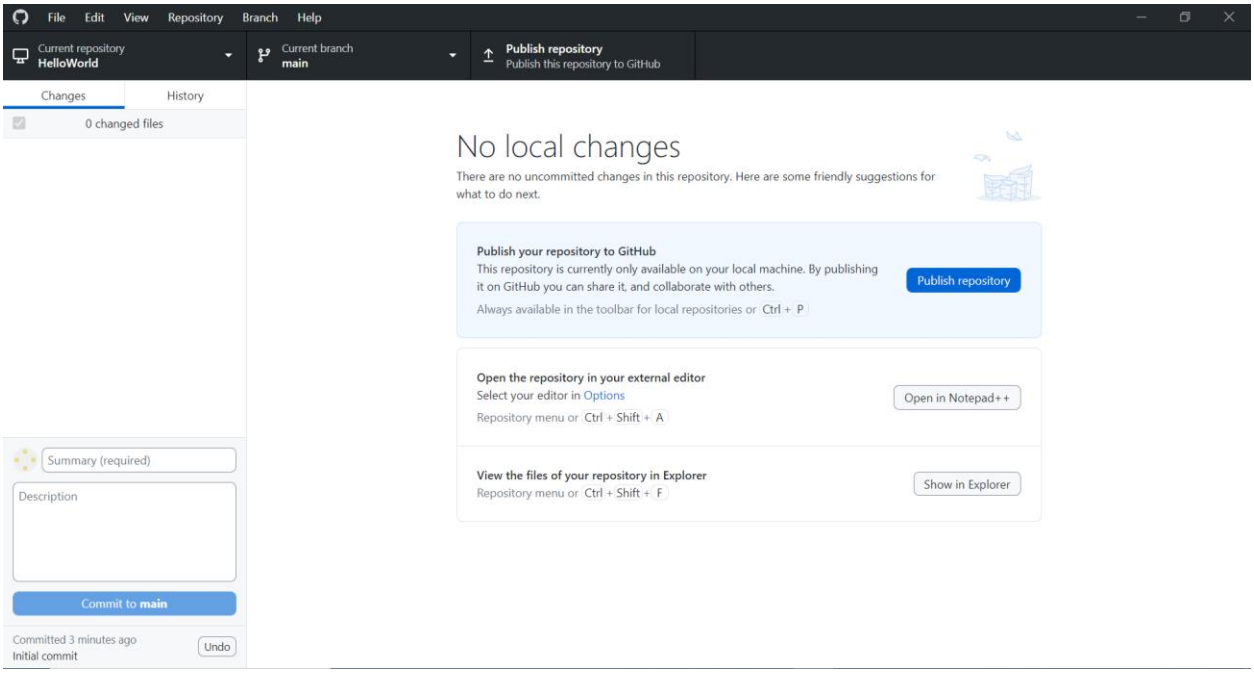
3: Create a Repository

Open GitHub Desktop -> Go to “File” -> Click “New repository”

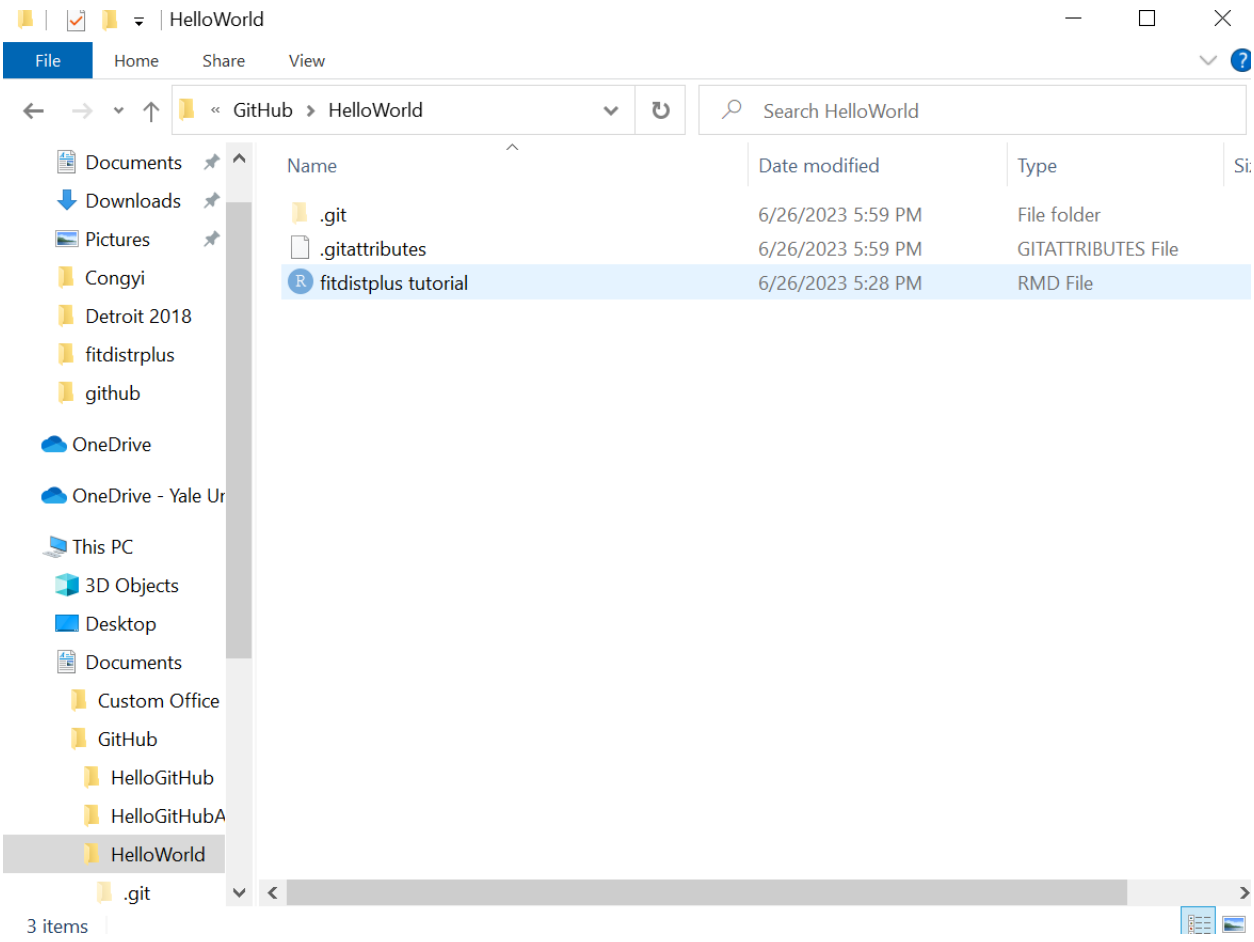
A window like this should pop up:



We created a repository with name “HelloWorld”, and this is what a repository should be looked like initially.

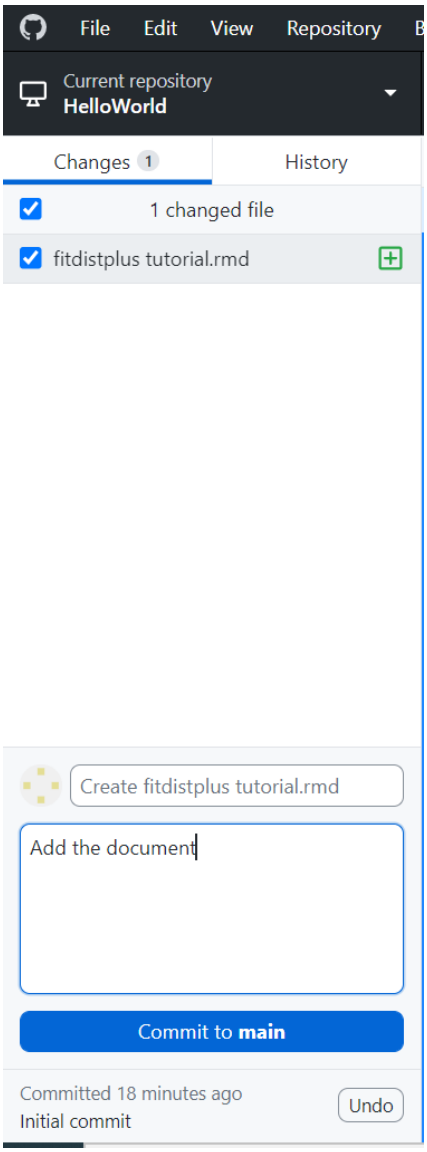


To add a file to the repository, click on “Show in Explorer”, and copy the file into the folder.



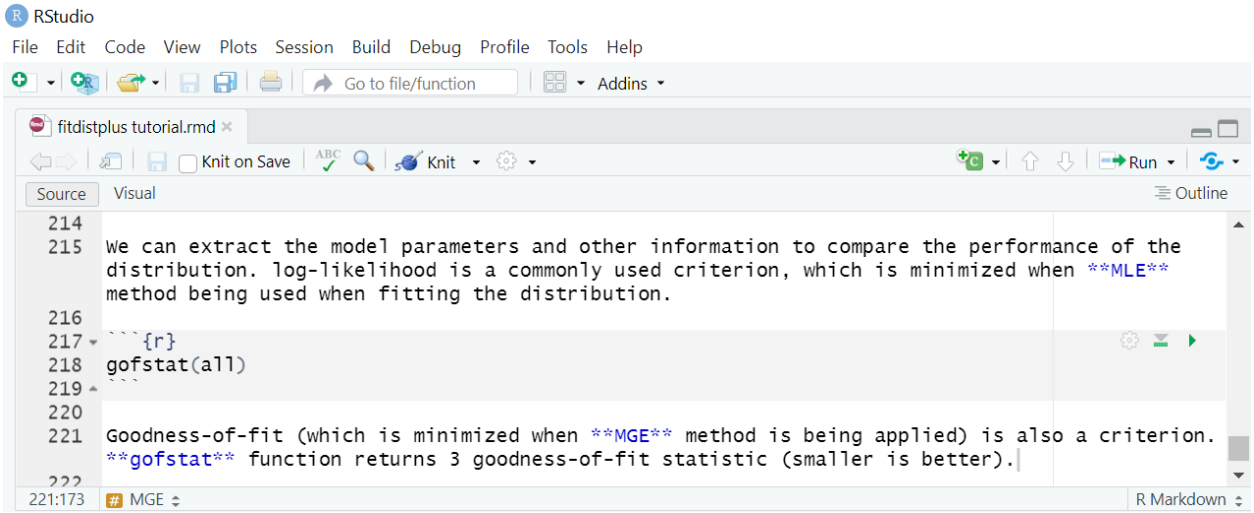
4: Making a change

After this step (or making any changes to the code), you will find GitHub Desktop show there is a change being made.

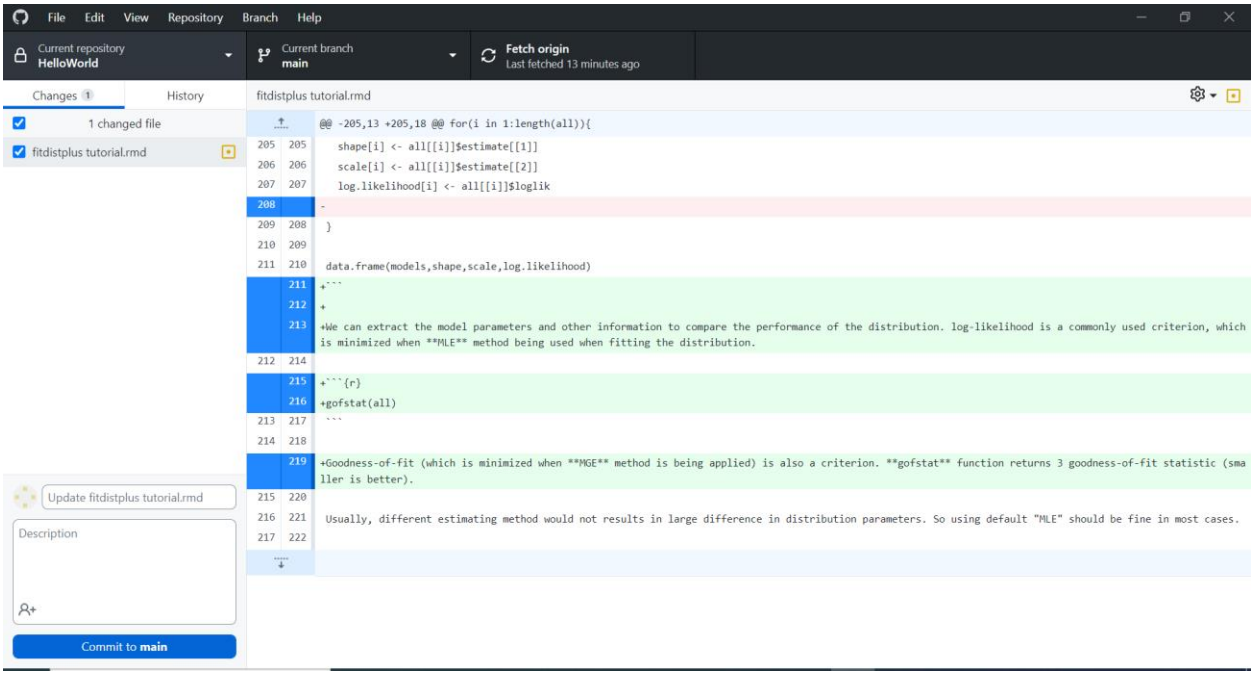


One need to click on “Commit to main” if you want the change being archived. The version before/after the change will both be saved. You could leave comments as a note for the change you made.

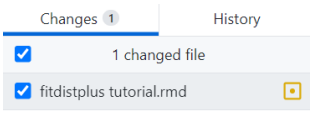
Now we want to make some extra changes on the code. For example, I added an illustration to the “fitdistrplus.rmd” file.

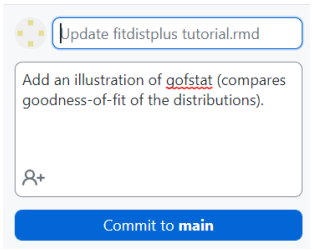


After save the changes, one can find the changes being recorded by Github desktop.

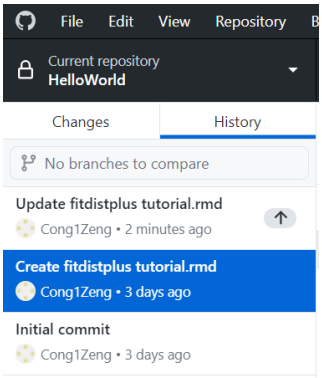


Type in some description of the changes and Commit.



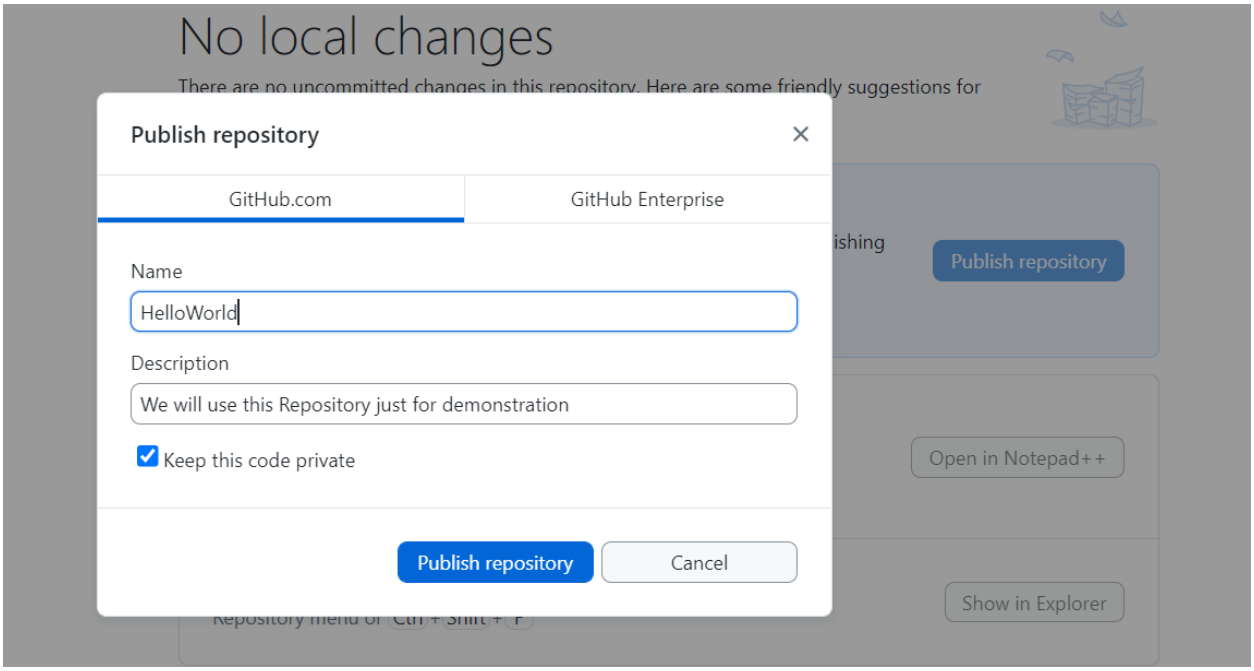


In “history”, one can view on changes and track on the historical versions.

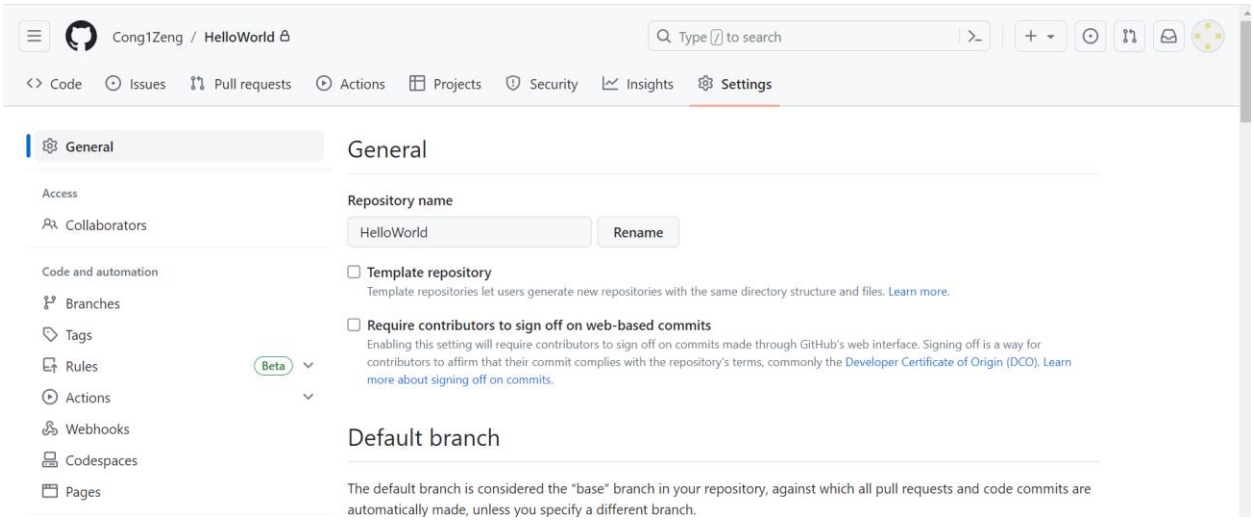


5: Publish /Push /Fetch/ Pull a Repository

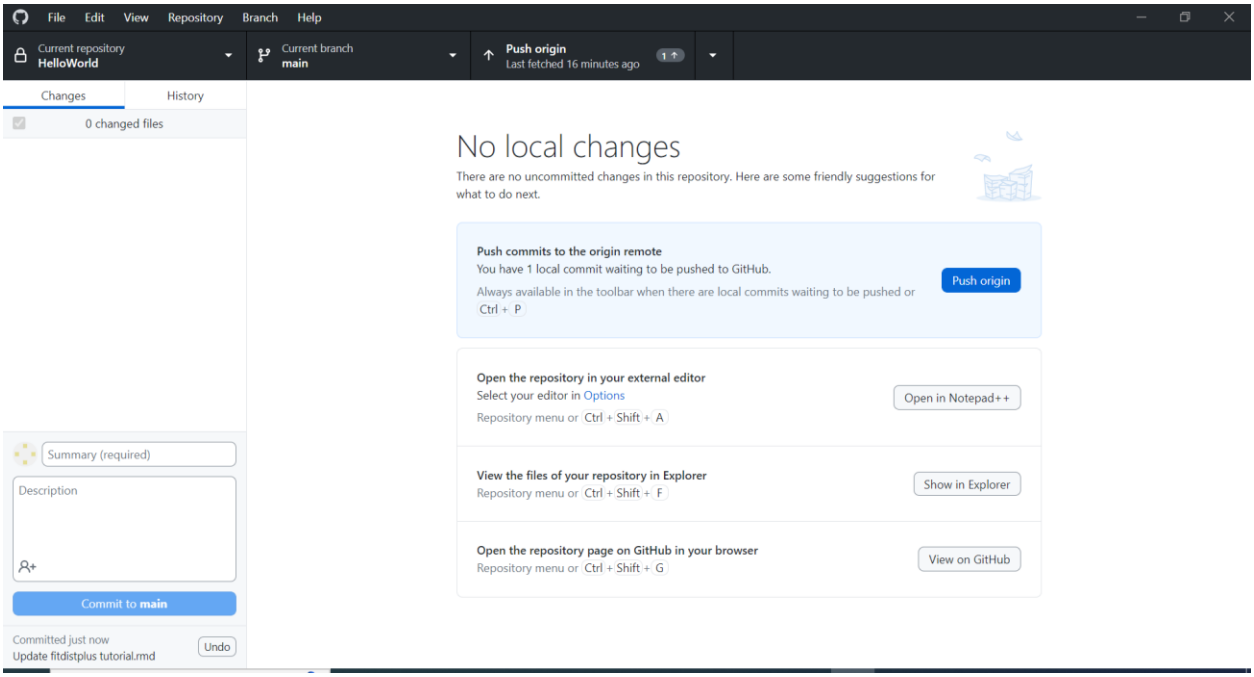
Normally we want one Repository to be accessible by multiple people. Just click on “Publish respiratory” to make a repository being accessible.



To add a collaborator to this repository, open the repository in browser (Repository -> View on GitHub), and click (setting -> collaborator).



“Push” is to update the changes being made locally to the repository. After changes have been committed, one can click on “Push Origin” to complete the step.



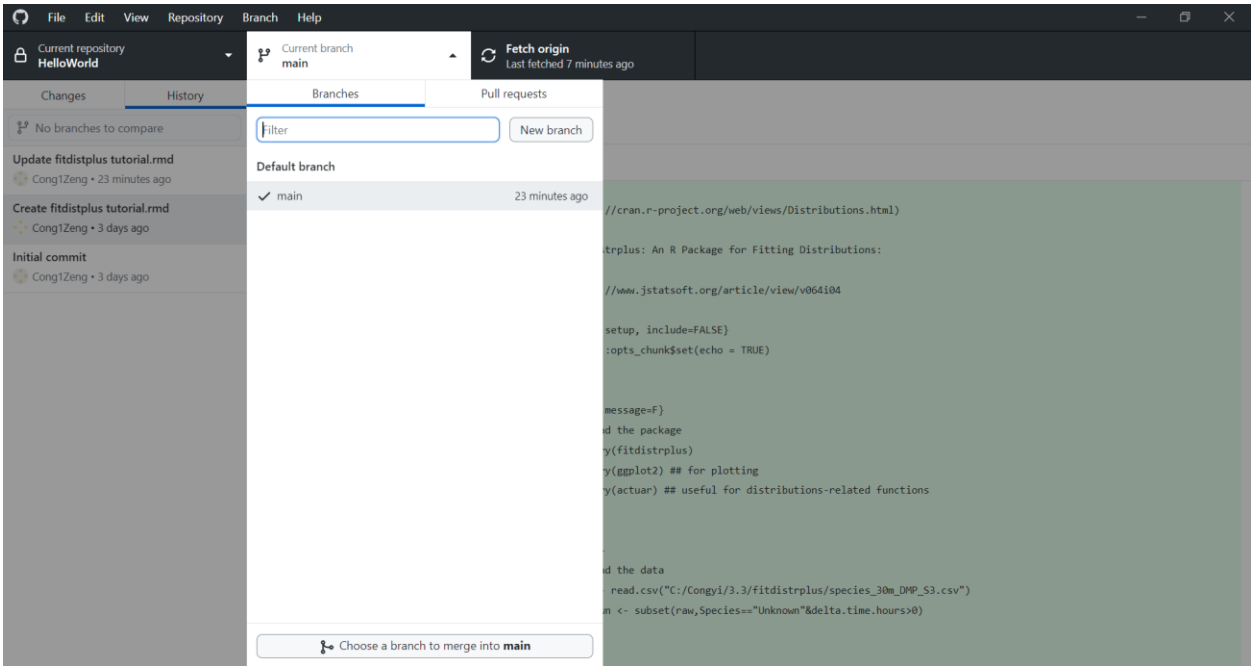
“Fetch”, is to update the local version by download new versions from repository. After this step, one can access to changes made by other collaborators.

“Pull” is an alternative of “Fetch”. Both are to update remote changes to local. The main difference between the two operations is that “Pull” make changes to the local documents, while “Fetch” do not, it just download the new data and code.

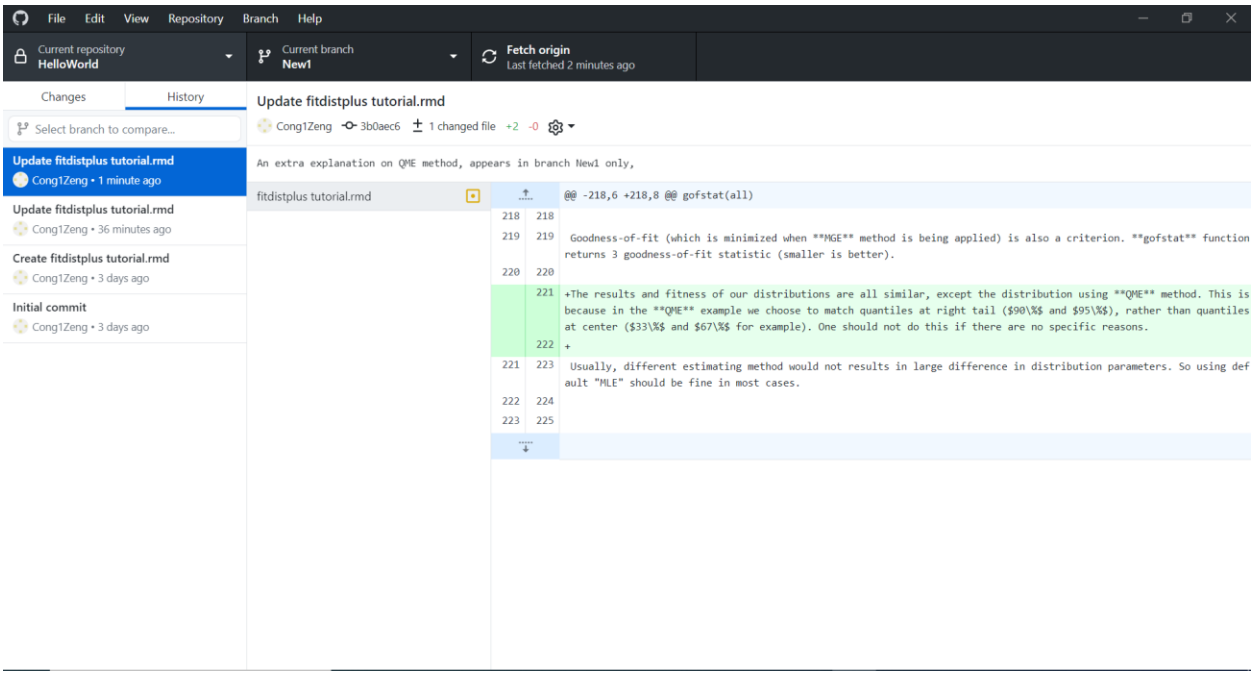
6: Branch

“Branch” enables people make changes to the project independently.

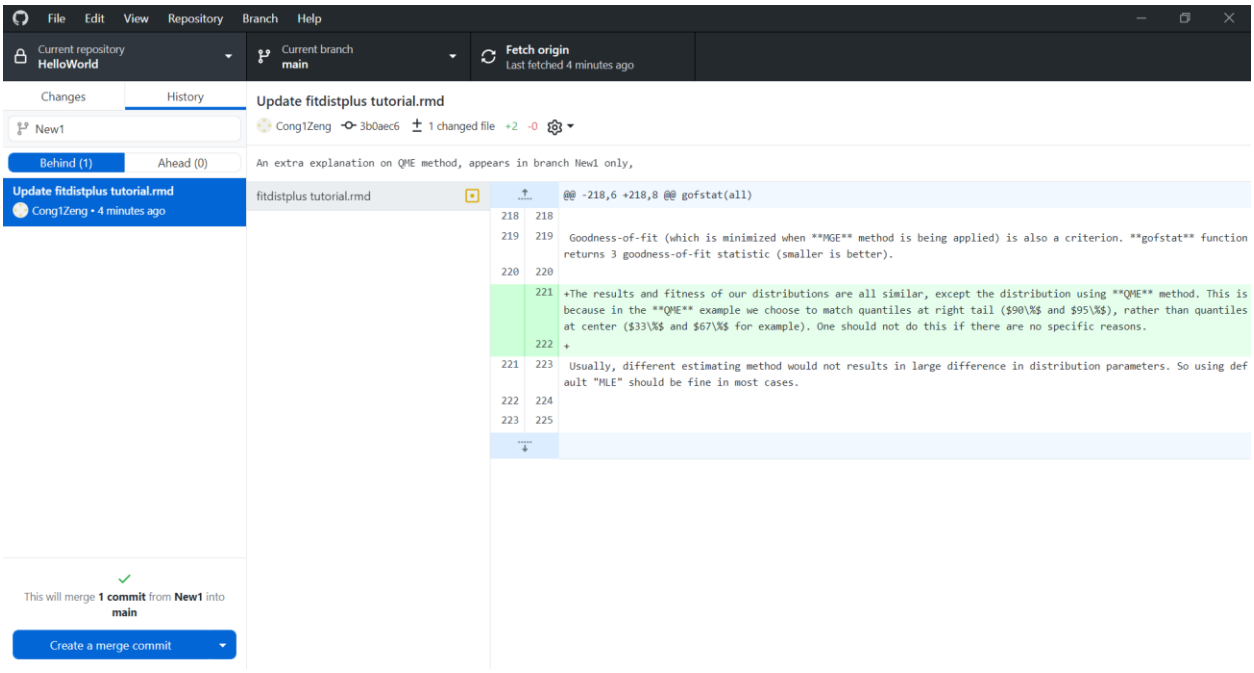
To create a new branch, click on “New branch”.



Now I created a branch named “New1” and made some extra changes. One can find it in the history of “New1” but not the history of “main”.



One can compare between the branches to get a clear view of what changes being made to each branches. “Create a merge commit” will merge the selected change in a branch to the current branch you are working on.



If select all differences between 2 branches and merge, then the branch is “behind” will be updated to he “ahead” version.