Introduction to GitHub tutorial: A basic visual guide

Stephanie N. DeCross
Harvard University, Department of Psychology
sdecross@g.harvard.edu | https://github.com/sdecross

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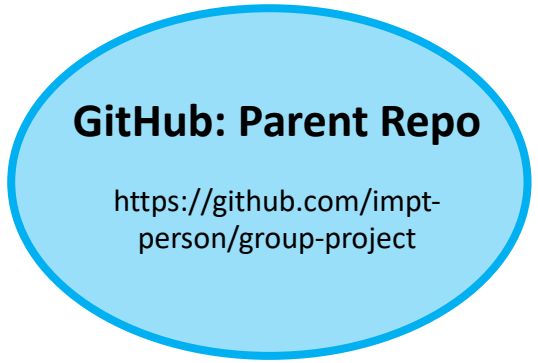
How do I use GitHub to collaborate on a project?

Local computer

The cloud



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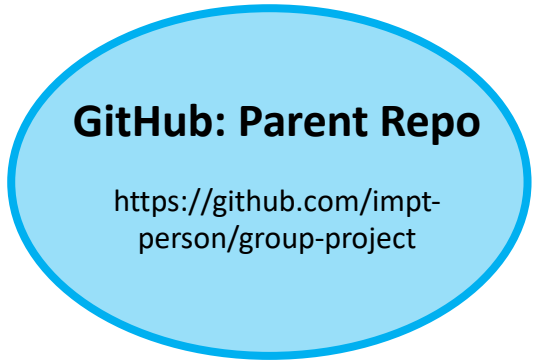

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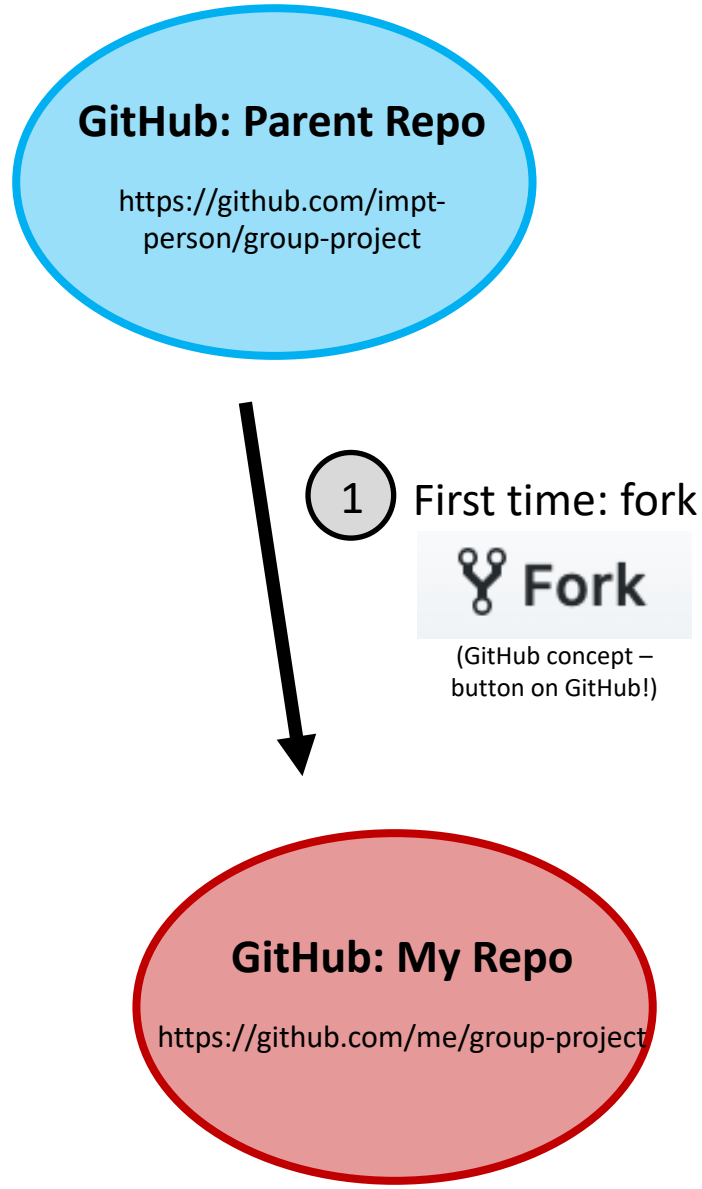

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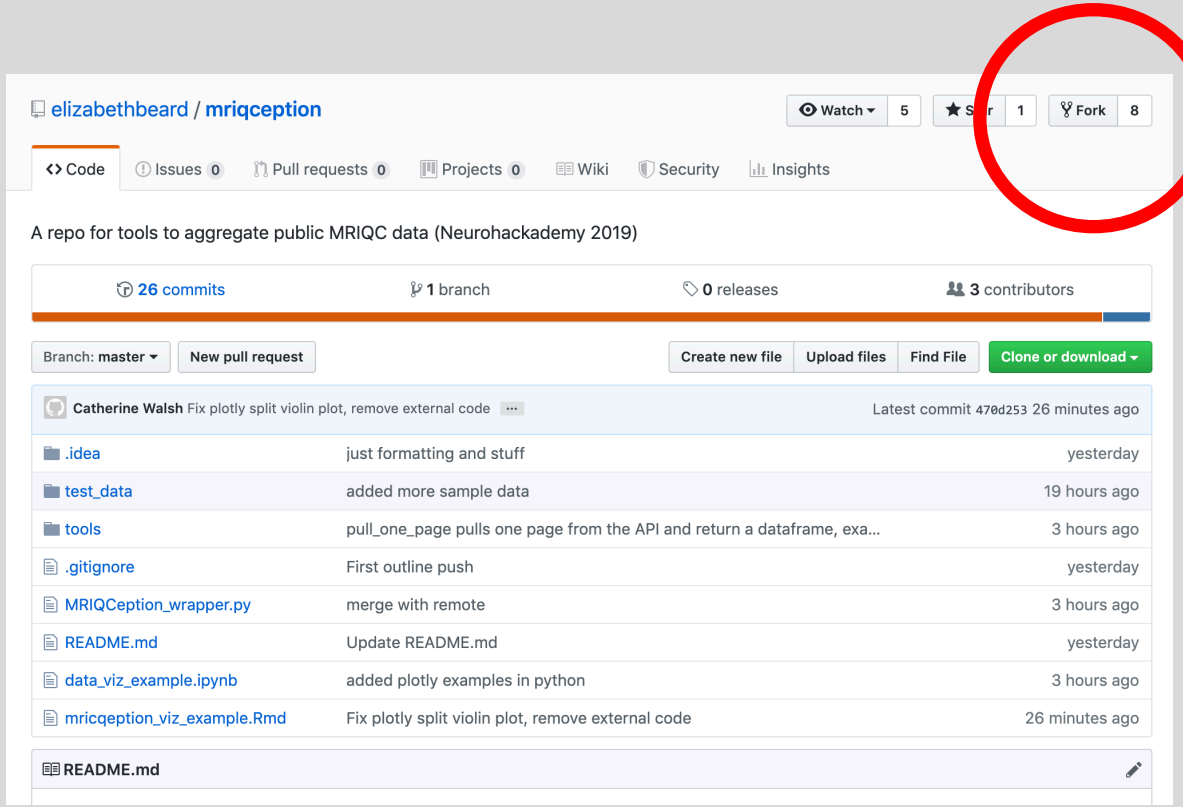

Local computer

GitHub: Parent Repo

https://github.com/impt-person/group-project

1 First time: fork

Fork

(GitHub concept – button on GitHub!)

GitHub: My Repo

https://github.com/me/group-project

The cloud

My Laptop

~/Desktop/group-project

Local computer

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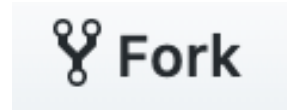

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Thereafter, pull

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Local computer

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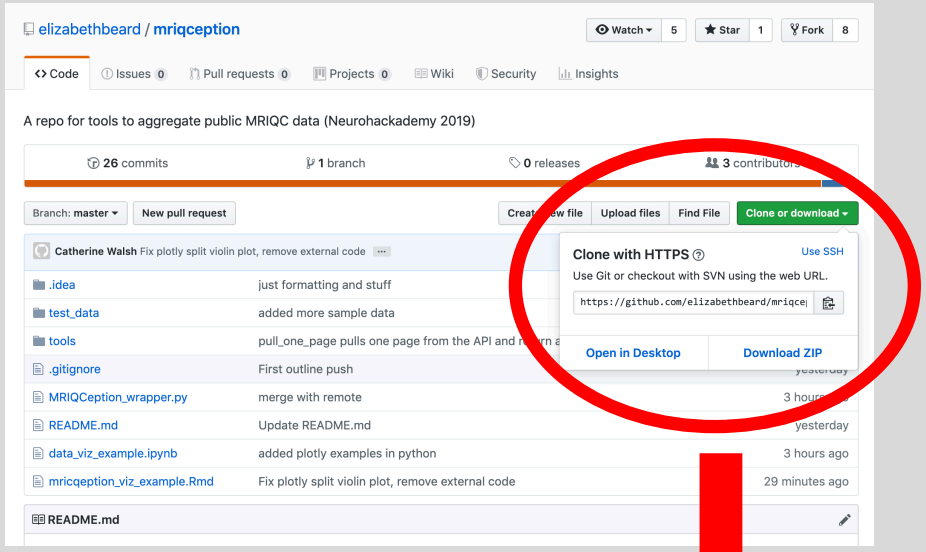

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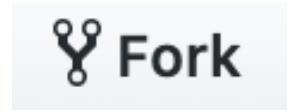

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Local computer

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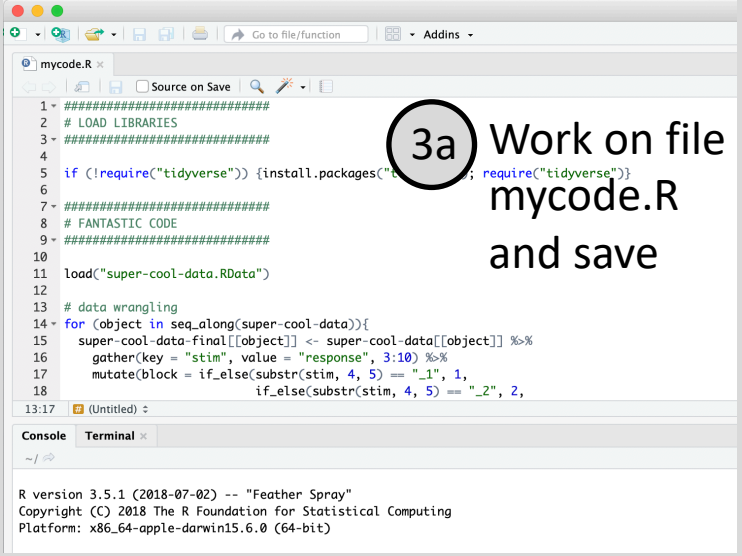

3a Work on file mycode.R and save

My Laptop

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Thereafter, pull

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Local computer

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(GitHub concept – button on GitHub!)

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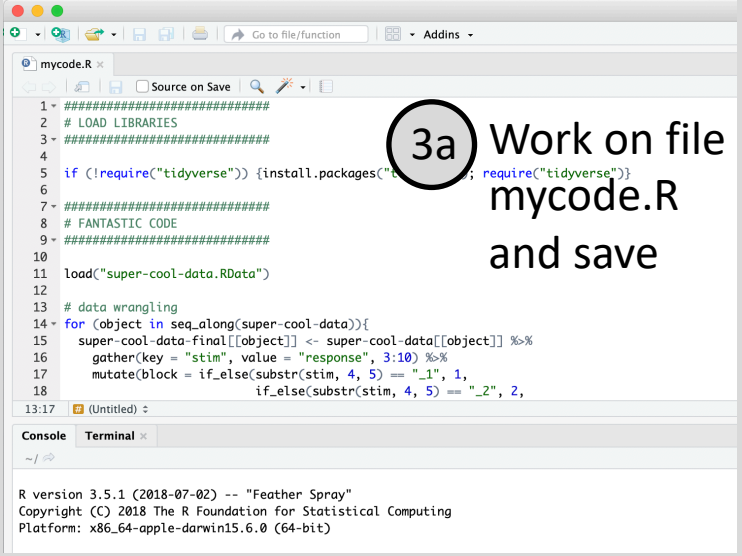

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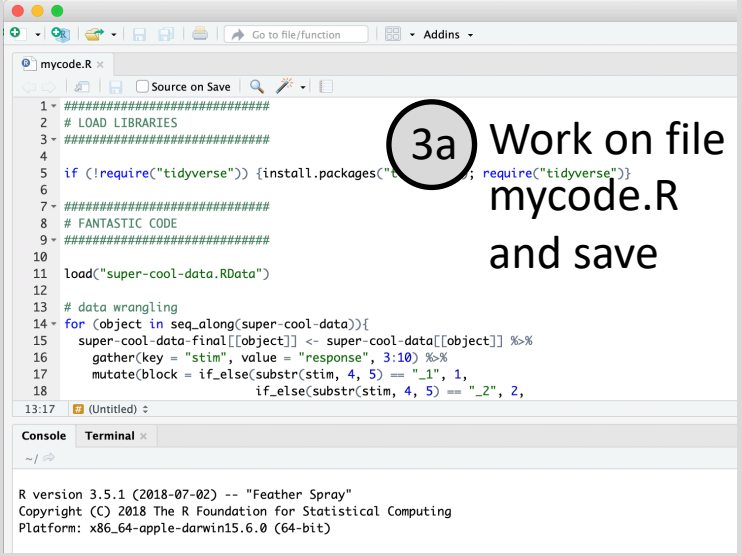

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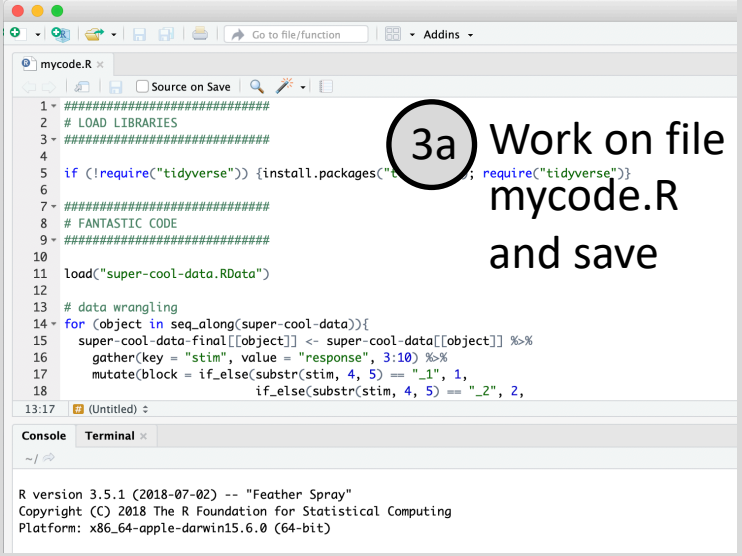

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(GitHub concept – button on GitHub!)

GitHub: My Repo

https://github.com/me/group-project

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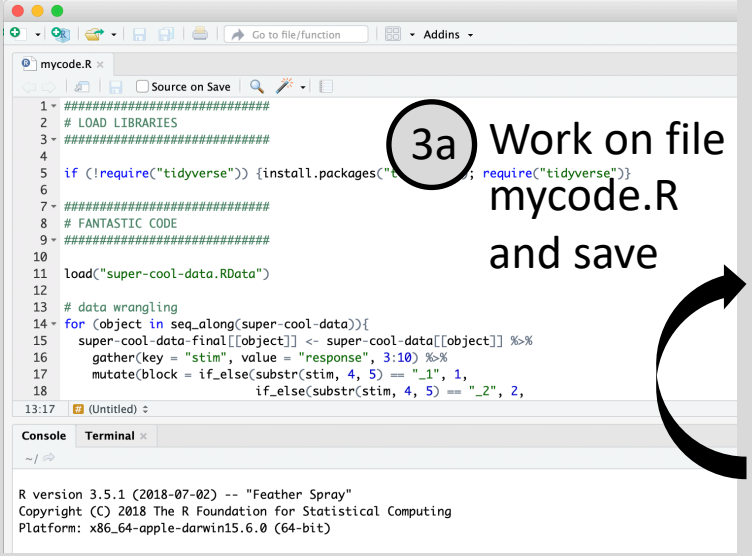

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1 First time: fork

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(GitHub concept – button on GitHub!)

GitHub: My Repo

https://github.com/me/group-project

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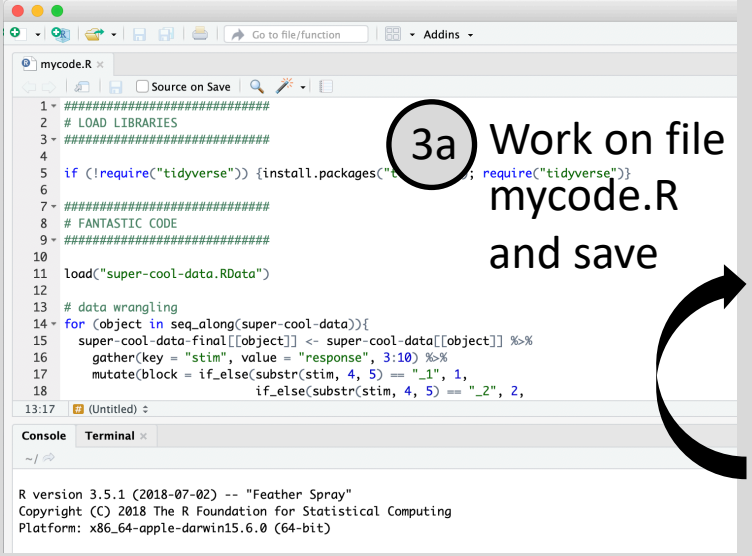

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1 First time: fork

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(GitHub concept – button on GitHub!)

GitHub: My Repo

https://github.com/me/group-project

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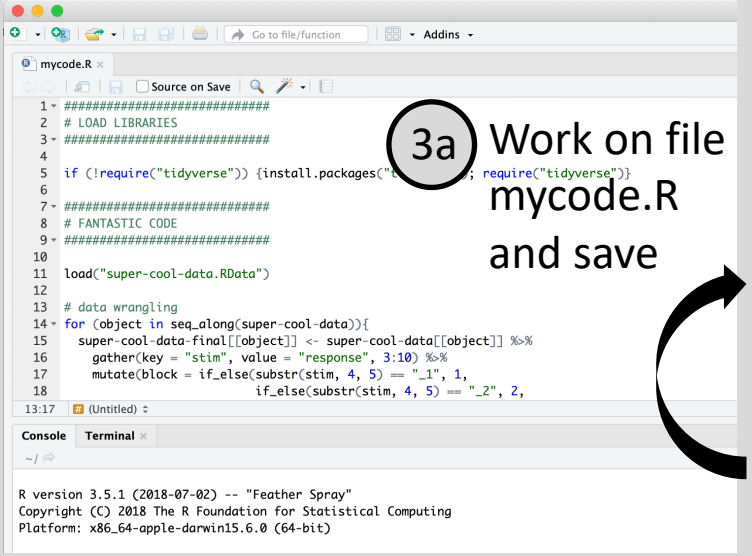

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My Laptop

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4 Push to origin (My Repo by default!)

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1 First time: fork

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(GitHub concept – button on GitHub!)

GitHub: My Repo

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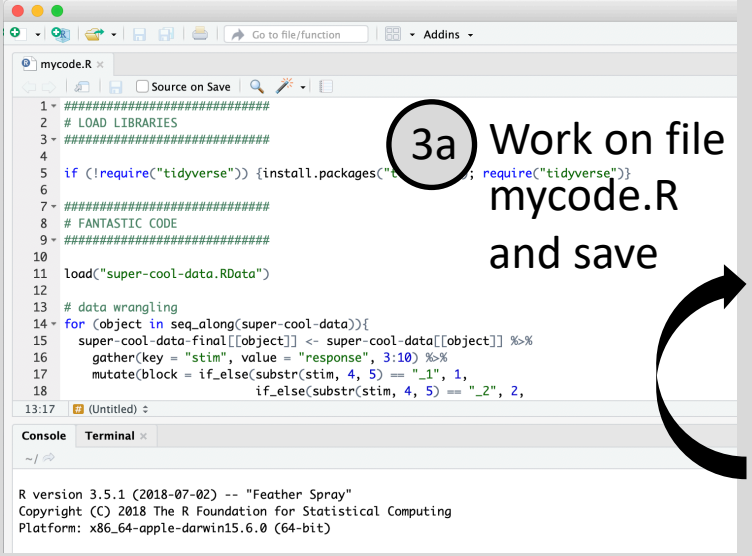

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1 First time: fork

Fork

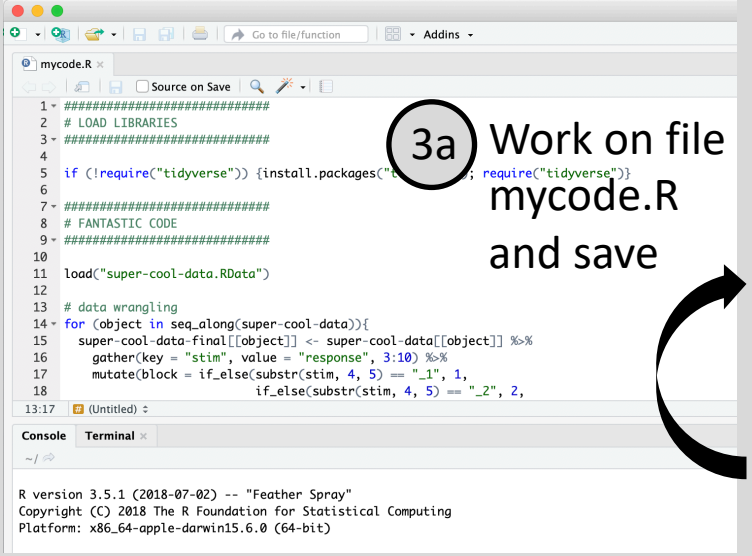
(GitHub concept – button on GitHub!)

origin

GitHub: My Repo

https://github.com/me/group-project

The cloud



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Local computer

GitHub: Parent Repo

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5 Pull request

New pull request

(GitHub concept – button on GitHub!)

1 First time: fork

Fork

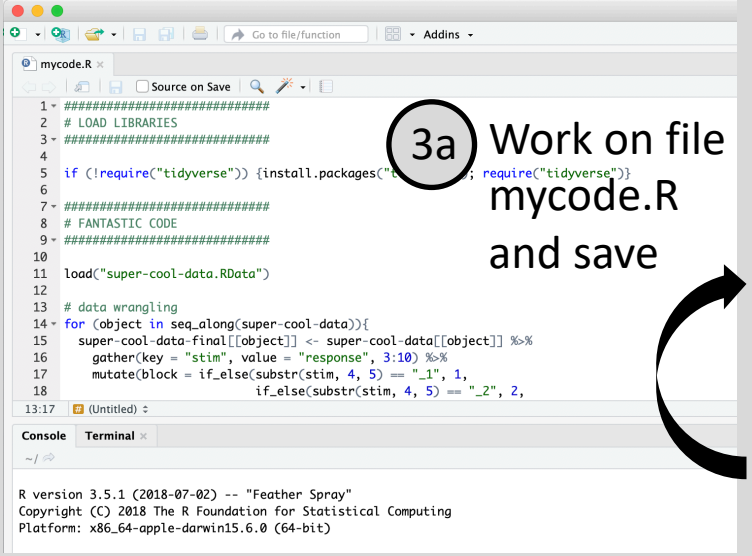
(GitHub concept – button on GitHub!)

origin

GitHub: My Repo

https://github.com/me/group-project

The cloud



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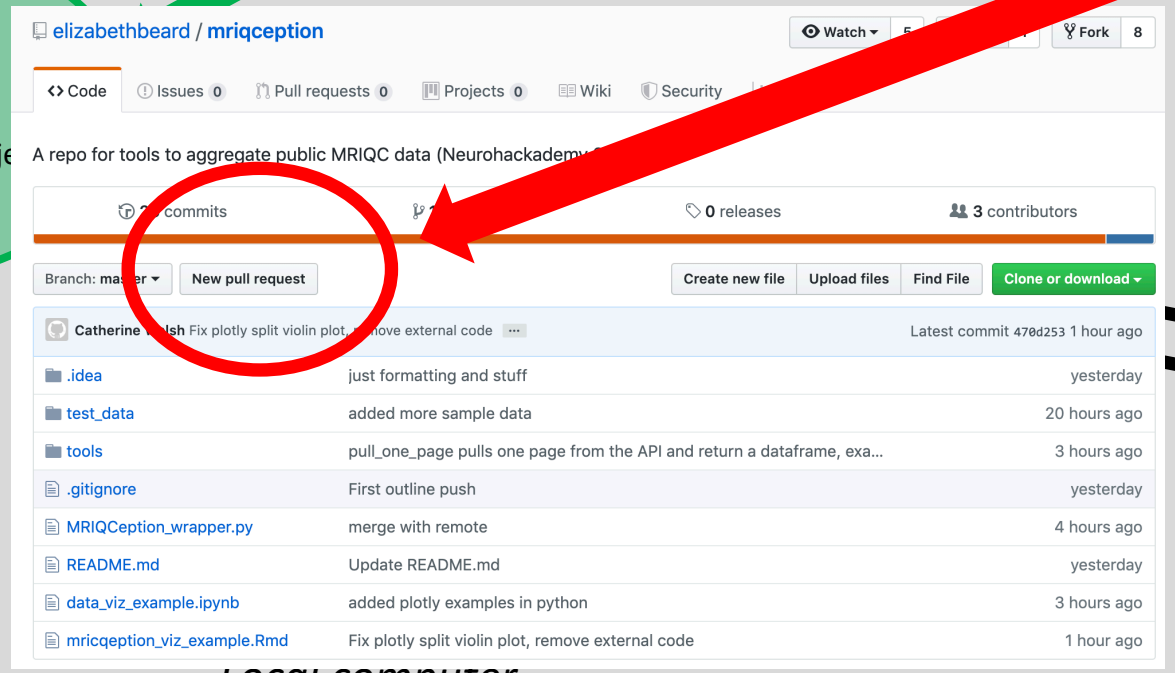
My Laptop

~/Desktop/group-proje



Local computer

GitHub: Parent Repo

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5 Pull request

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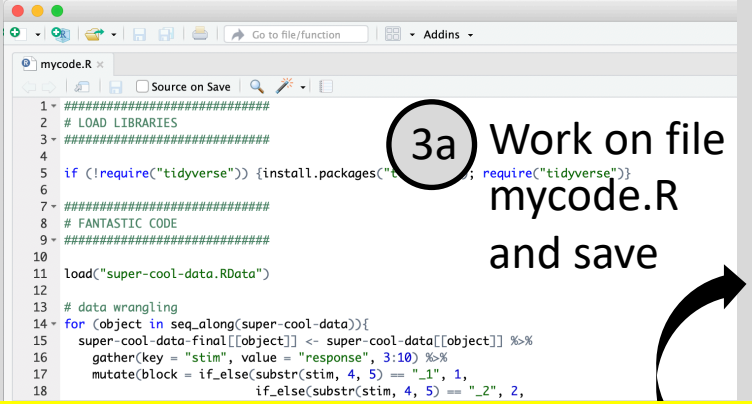

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If you have direct write access to the parent repo, you can push directly to upstream (it doesn't require permission, like a pull request). This would take the place of step 5.

```
~/Desktop$ git push upstream master
```

5 Pull request

New pull request

(GitHub concept – button on GitHub!)

GitHub: Parent Repo

https://github.com/impt-person/group-project

1 First time: fork

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(GitHub concept – button on GitHub!)

My Laptop

~/Desktop/group-project

4 Push to origin (My Repo by default!)

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Thereafter, pull

```
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origin

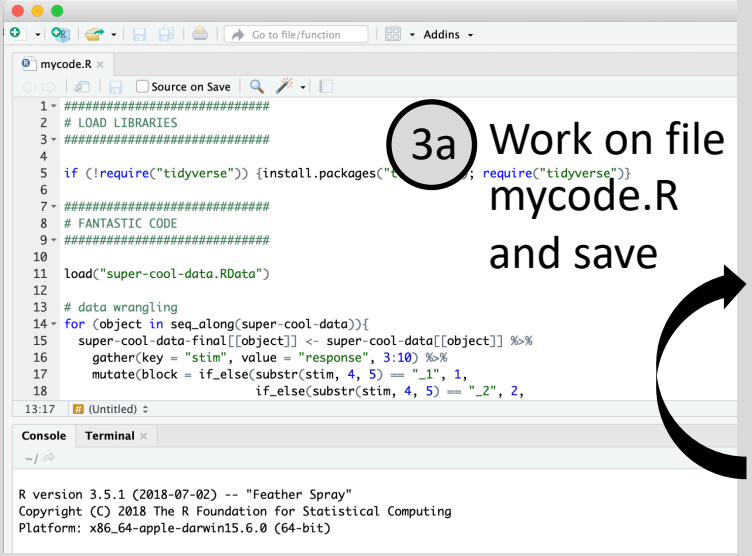
GitHub: My Repo

https://github.com/me/group-project

Local computer

The cloud

What if someone makes changes to the parent repo? How do I get the latest version?



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New pull request

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GitHub: My Repo

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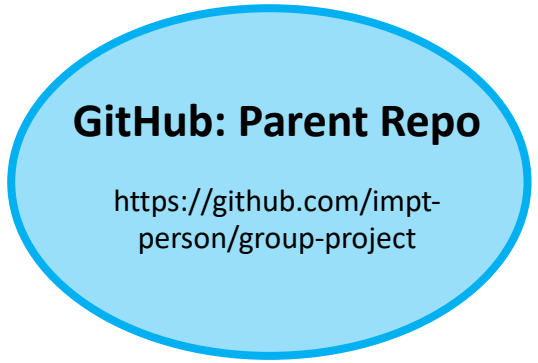
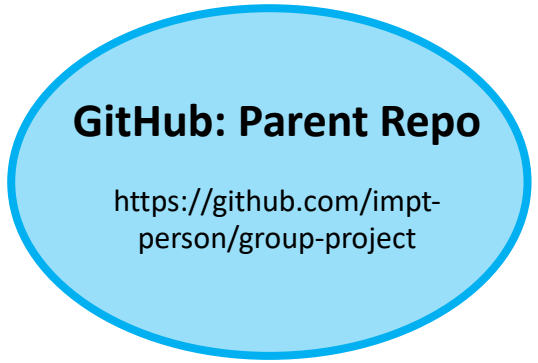


Local computer

The cloud

Get updates from parent repo



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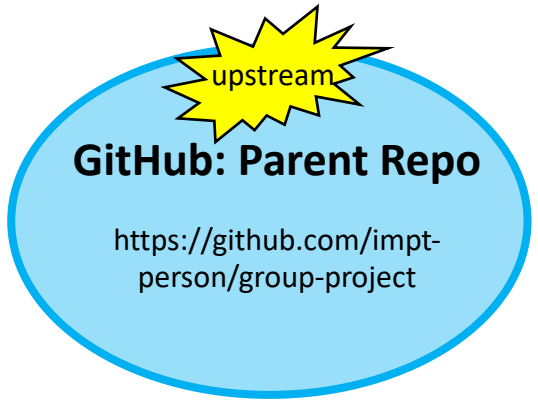

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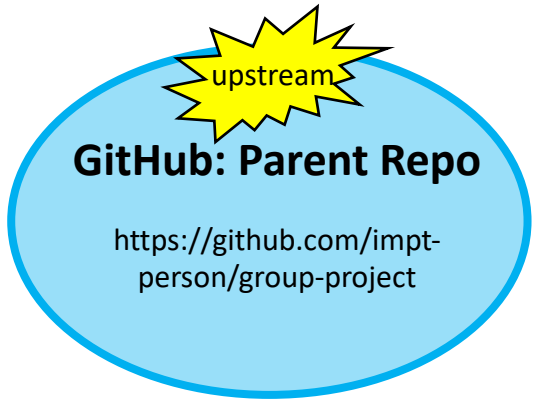


1. Link the parent repo to your local project and check that it connected

(Only need to do once!)

```
group-project$ git remote add upstream
https://github.com/impt-person/group-
project.git
group-project$ git remote -v
```

Local computer

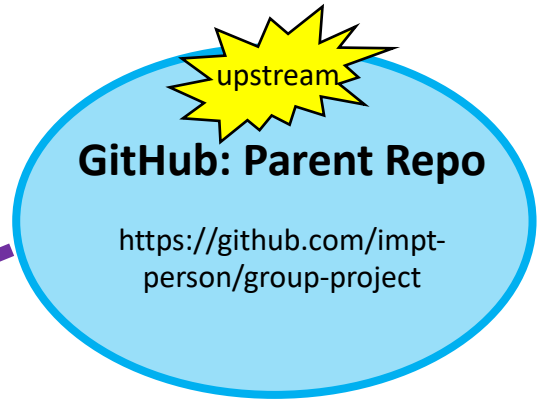
The cloud

Get updates from parent repo

2 Pull from parent repo to local project

```
group-project$ git pull upstream master
```

(This doesn't update My Repo though!)



1 Link the parent repo to your local project and check that it connected

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```
group-project$ git remote add upstream https://github.com/impt-person/group-project.git
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Local computer

The cloud

Get updates from parent repo

2 Pull from parent repo to local project

```
group-project$ git pull upstream master
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(This doesn't update My Repo though!)

upstream

GitHub: Parent Repo

https://github.com/impt-person/group-project

My Laptop

~/Desktop/group-project

3 Push to origin (My Repo by default!)

```
group-project$ git push
```

origin

GitHub: My Repo

https://github.com/me/group-project

1 Link the parent repo to your local project and check that it connected (Only need to do once!)

```
group-project$ git remote add upstream https://github.com/impt-person/group-project.git
group-project$ git remote -v
```

Local computer

The cloud

Get updates from parent repo

2 Pull from parent repo to local project

```
group-project$ git pull upstream master
```

(This doesn't update My Repo though!)

upstream

GitHub: Parent Repo

https://github.com/impt-person/group-project

Parent repo, local project, and my repo are now all updated.

My Laptop

~/Desktop/group-project

3 Push to origin (My Repo by default!)

```
group-project$ git push
```

origin

GitHub: My Repo

https://github.com/me/group-project

1 Link the parent repo to your local project and check that it connected (Only need to do once!)

```
group-project$ git remote add upstream https://github.com/impt-person/group-project.git
group-project$ git remote -v
```

Local computer

The cloud

Get updates from parent repo

2 Pull from parent repo to local project

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Parent repo, local project, and my repo are now all updated.

My Laptop

~/Desktop/group-project

3 Push to origin (My Repo by default!)

```
group-project$ git push
```

origin

GitHub: My Repo

https://github.com/me/group-project

1 Link the parent repo to your local project and check that it connected (Only need to do once!)

```
group-project$ git remote add upstream https://github.com/impt-person/group-project.git
group-project$ git remote -v
```

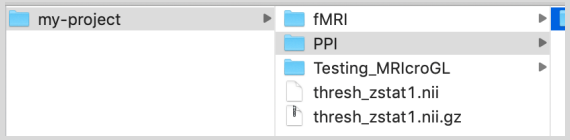
Pull from parent repo & push to origin (steps 2-3) at least once a day to stay updated!

Local computer

The cloud

How do I get my folder on my computer onto GitHub?
(How do I go the other way
and go FROM my computer TO GitHub?)

(Directory to be git-ified)



My Laptop

~/Desktop/my-project

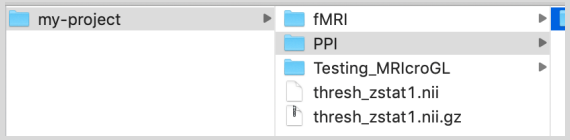
GitHub: My Account

FROM my computer TO GitHub

Local computer

The cloud

(Directory to be git-ified)



My Laptop

~/Desktop/my-project

1 On GitHub, click the plus button to add an empty new repository, name it, and note the URL.

GitHub: My Repo

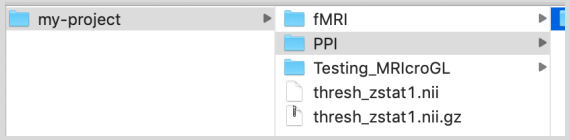
https://github.com/me/repo-project

FROM my computer TO GitHub

Local computer

The cloud

(Directory to be git-ified)



My Laptop

~/Desktop/repo-project

My Laptop

~/Desktop/my-project

1 On GitHub, click the plus button to add an empty new repository, name it, and note the URL.

2 Clone repo to desktop

```
~/Desktop$ git clone https://github.com/me/repo-project.git
```

GitHub: My Repo

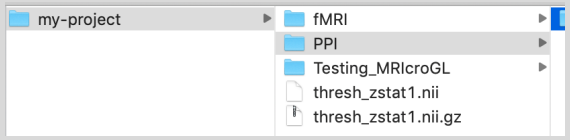
https://github.com/me/repo-project

FROM my computer TO GitHub

Local computer

The cloud

(Directory to be git-ified)



3 Drag-and-drop (or $ mv) contents of my-project into repo-project. Repo-project is already initialized and already has the origin linked, since it was cloned.

1 On GitHub, click the plus button to add an empty new repository, name it, and note the URL.

My Laptop

~/Desktop/repo-project

My Laptop

~/Desktop/my-project

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~/Desktop$ git clone https://github.com/me/repo-project.git
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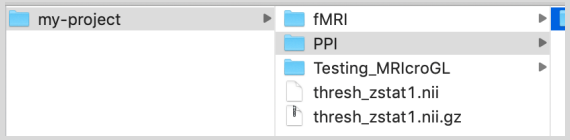
FROM my computer TO GitHub

Local computer

The cloud

(Directory to be git-ified)



3 Drag-and-drop (or $ mv) contents of my-project into repo-project. Repo-project is already initialized and already has the origin linked, since it was cloned.

4 Add and commit the contents.

```
~/Desktop/repo-project$ git add .
~/Desktop/repo-project$ git commit -m “First commit”
```

My Laptop

~/Desktop/repo-project

My Laptop

~/Desktop/my-project

2 Clone repo to desktop

```
~/Desktop$ git clone https://github.com/me/repo-project.git
```

1 On GitHub, click the plus button to add an empty new repository, name it, and note the URL.

GitHub: My Repo

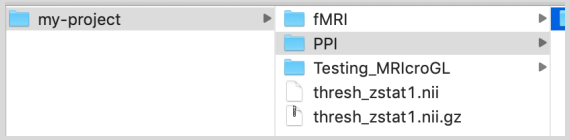
https://github.com/me/repo-project

FROM my computer TO GitHub

Local computer

The cloud

(Directory to be git-ified)



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4 Add and commit the contents.

```
~/Desktop/repo-project$ git add .
~/Desktop/repo-project$ git commit -m “First commit”
```

My Laptop

~/Desktop/repo-project

My Laptop

~/Desktop/my-project

5 Push to the origin

```
~/Desktop/repo-project$ git push
```

2 Clone repo to desktop

```
~/Desktop$ git clone https://github.com/me/repo-project.git
```

GitHub: My Repo

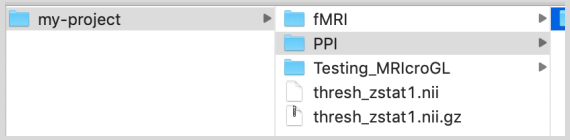
https://github.com/me/repo-project

FROM my computer TO GitHub

Local computer

The cloud

(Directory to be git-ified)



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1 On GitHub, click the plus button to add an empty new repository, name it, and note the URL.

4 Add and commit the contents.

```
~/Desktop/repo-project$ git add .
~/Desktop/repo-project$ git commit -m “First commit”
```

My Laptop

~/Desktop/repo-project

5 Push to the origin

```
~/Desktop/repo-project$ git push
```

My Laptop

~/Desktop/my-project

2 Clone repo to desktop

```
~/Desktop$ git clone https://github.com/me/repo-project.git
```

GitHub: My Repo

https://github.com/me/repo-project

You can delete the empty “my-project” locally. Work more locally (in repo-project) and save file, then repeat steps 4-5. Rinse & repeat.

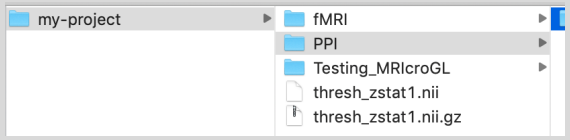
FROM my computer TO GitHub

Local computer

The cloud

How do I get my folder on my computer onto GitHub?
(How do I go the other way
and go FROM my computer TO GitHub?)
… another way.

(Directory to be git-ified)



My Laptop

~/Desktop/my-project

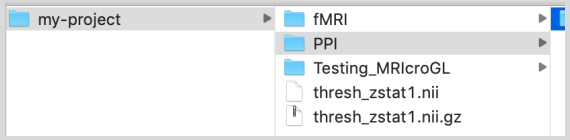
GitHub: My Account

FROM my computer TO GitHub

Local computer

The cloud

(Directory to be git-ified)



My Laptop

~/Desktop/my-project

1 On GitHub, click the plus button to add an empty new repository, name it, and note the URL.

GitHub: My Repo

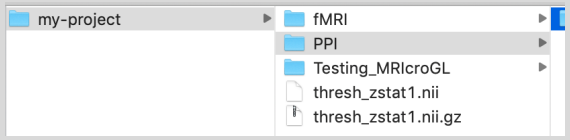
https://github.com/me/my-project

FROM my computer TO GitHub

Local computer

The cloud

(Directory to be git-ified)



2 Initialize the directory, add it, and commit it. Then add the origin with the URL. Check that it's been added. (Only need to init, add origin, and verify origin once!)

```
~/Desktop$ cd my-project
~/Desktop/my-project$ git init
~/Desktop/my-project$ git add .
~/Desktop/my-project$ git commit -m “First commit”
~/Desktop/my-project$ git remote add origin
https://github.com/me/my-project.git
~/Desktop/my-project$ git remote -v
```

1 On GitHub, click the plus button to add an empty new repository, name it, and note the URL.

My Laptop

~/Desktop/my-project

origin

GitHub: My Repo

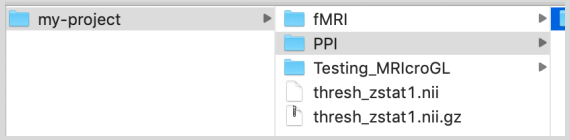
https://github.com/me/my-project

FROM my computer TO GitHub

Local computer

The cloud

(Directory to be git-ified)



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~/Desktop$ cd my-project
~/Desktop/my-project$ git init
~/Desktop/my-project$ git add .
~/Desktop/my-project$ git commit -m “First commit”
~/Desktop/my-project$ git remote add origin
https://github.com/me/my-project.git
~/Desktop/my-project$ git remote -v
```

1 On GitHub, click the plus button to add an empty new repository, name it, and note the URL.

My Laptop

~/Desktop/my-project

3 Push to the origin

```
~/Desktop/my-project$ git push origin master
```

origin

GitHub: My Repo

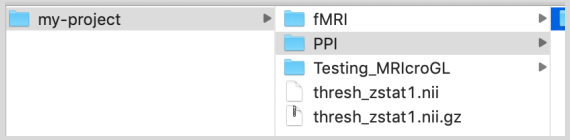
https://github.com/me/my-project

FROM my computer TO GitHub

Local computer

The cloud

(Directory to be git-ified)



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~/Desktop$ cd my-project
~/Desktop/my-project$ git init
~/Desktop/my-project$ git add .
~/Desktop/my-project$ git commit -m “First commit”
~/Desktop/my-project$ git remote add origin
https://github.com/me/my-project.git
~/Desktop/my-project$ git remote -v
```

1 On GitHub, click the plus button to add an empty new repository, name it, and note the URL.

My Laptop

~/Desktop/my-project

Work more locally and save file, then repeat yellow lines only in step 2 to add and commit, then repeat yellow part of step 3. Rinse & repeat.

origin

GitHub: My Repo

https://github.com/me/my-project

3 Push to the origin

```
~/Desktop/my-project$ git push origin master
```

FROM my computer TO GitHub

Local computer

The cloud