

Version Control




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Workshop materials: bit.ly/cville_pkg

Git + GitHub

Use both!

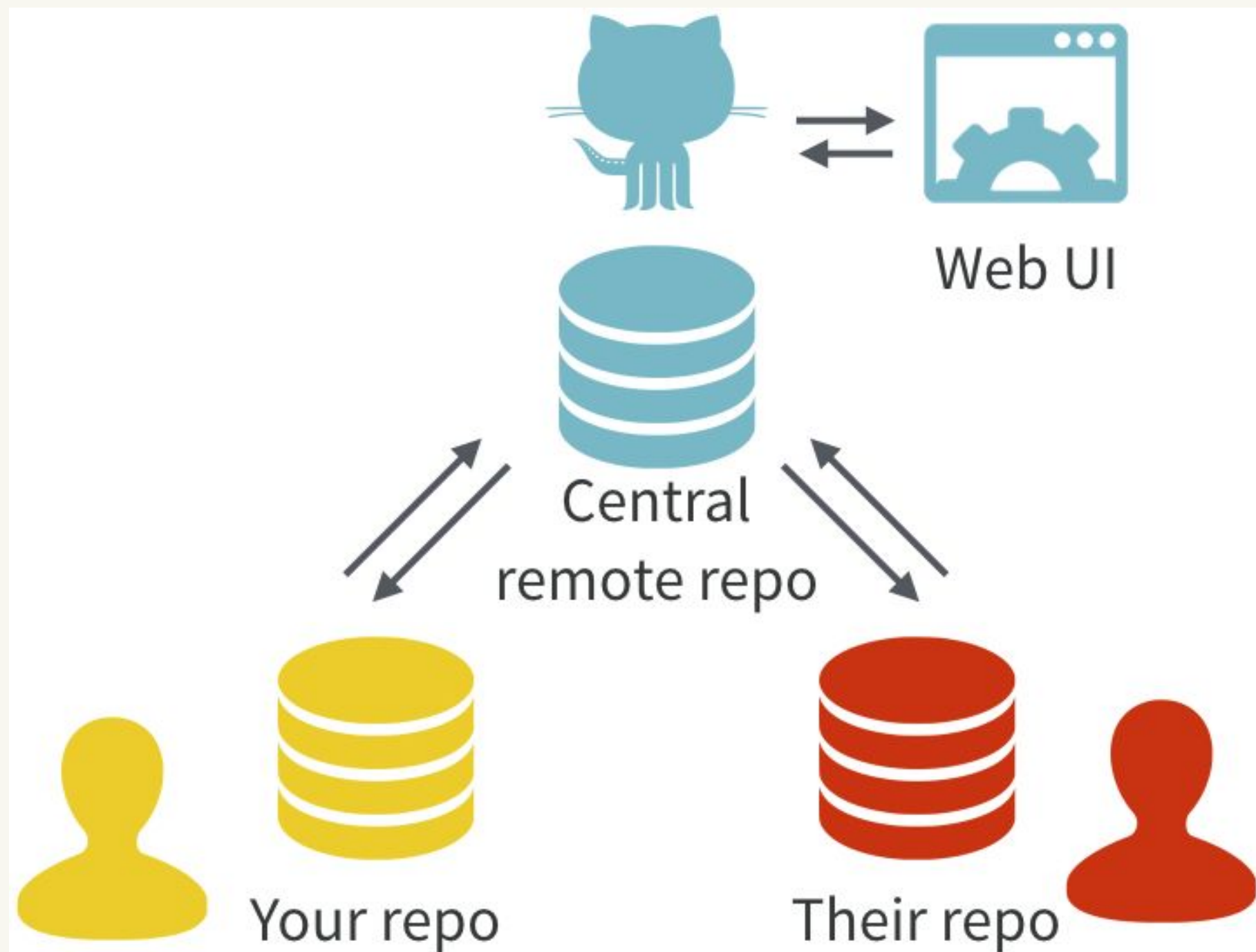
The    will
pay off



happygitwithr.com

Excuse me, do you have a moment to talk about version control?

<https://doi.org/10.7287/peerj.preprints.3159v2>



Demo

Another look around a GitHub repo
(README, commits, issues)



<https://github.com/brooke-watson/BRRR>

<https://github.com/jayqi/spongebob/>



If you don't have a github account of your own, you need to make one now!

Your turn

Do I already have Git?

```
which git
```

What version of Git do I have?

```
git --version
```

Eek! I don't have Git!

Fear not- time to install!

<https://git-scm.com/downloads>

Your turn

Hi Git!

In Terminal:

```
git config --global user.name 'Jane Doe'  
git config --global user.email 'jane@example.com'  
git config --global --list
```

OR in RStudio:

```
library(usethis)  
use_git_config(user.name = "Jane Doe", user.email  
= "jane@example.org")
```


Use the email address your github account uses.

Hook up to Github

Make a repo:


Overview **Repositories 24** Projects 0 Stars 8 Followers 33 Following 7

Find a repository... Type: All ▾ Language: All ▾ **New**




Create a new repository
A repository contains all project files, including the revision history.

Owner Repository name *

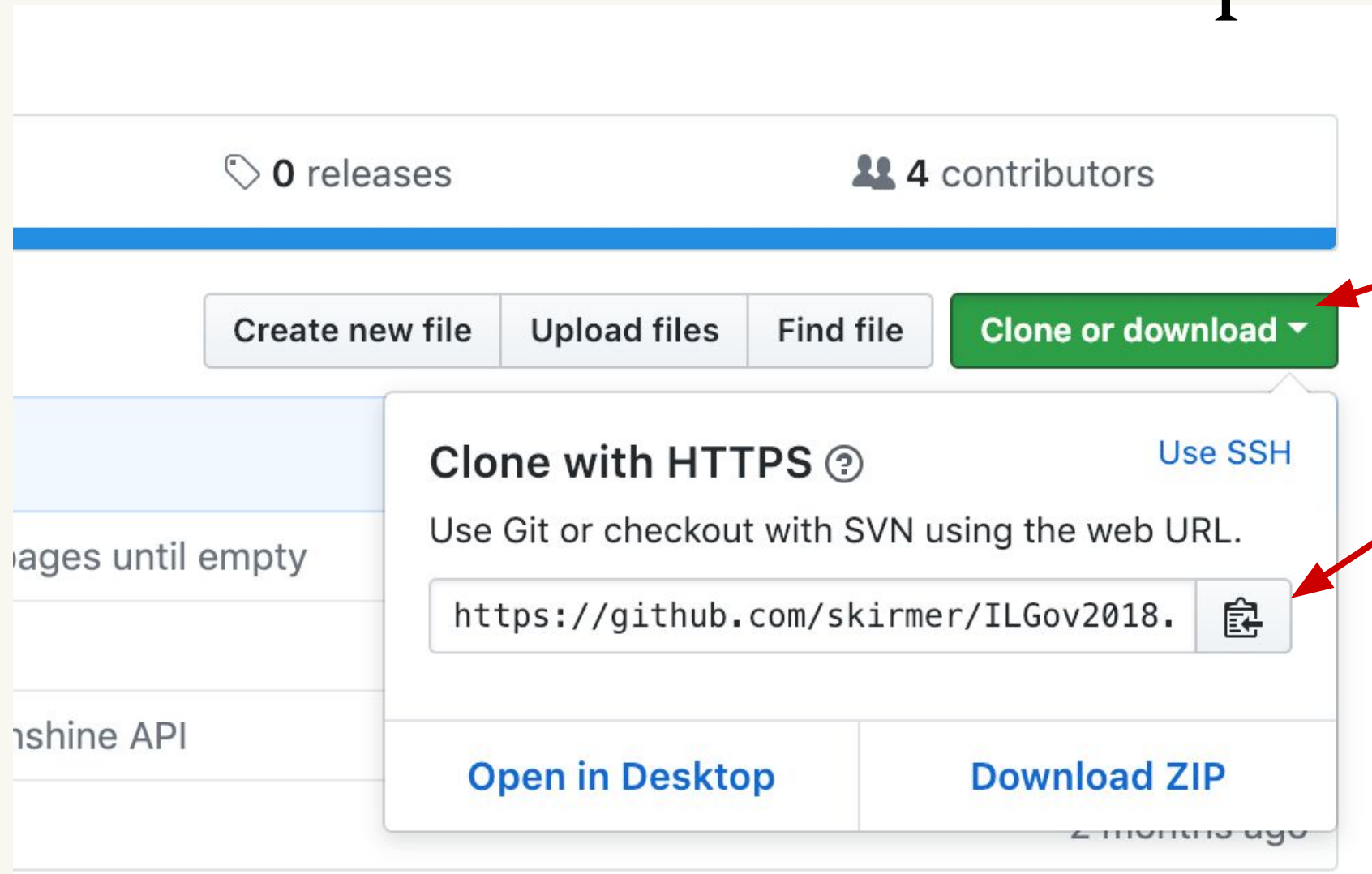
 skirmer ▾ /

Great repository names are short and memorable. Need inspiration? How about **refactored-pancake**?

Description (optional)



Clone Your Repo



This link tells your computer where to
“remote” location.

Clone Your Repo

Now, in your local terminal, type:

```
git clone https://github.com/YOUR-USERNAME/YOUR-REPOSITORY.git
```

This creates a partner folder in your local computer that is paired with the remote repository.

Git knows these two folders are paired, and can do many useful tasks to compare them and keep them consistent.

But I already have a local folder!

No problem. Create your repo as we already did, then, in your local folder:

```
git init
```

```
git remote add origin
```

```
https://github.com/YOUR-USERNAME/YOUR-REPOSITORY.git
```

```
git remote -v
```

This links your repo to your existing folder!



Stephanie Kirmer

@data_stephanie



Just learned something cool- when you screw up a git merge, you can use `git reset --hard master@{"300 minutes ago"}` with any time quantity you want in there to get back to where things were a period of time ago.

[#TheMoreYouKnow](#)

2:49 PM - 26 Feb 2018

967 Retweets 2,704 Likes



41



967



2.7K



Quick Git Commands

What's up with my repo?

```
git status
```

I want to put a file in line to be sent to "remote"

```
git add file.R
```

I'm sure that these added files are ready to go out

```
git commit -m "Let's go!"
```

Send these added files to "remote"!

```
git push origin HEAD (or master)
```

Quick Git Commands

I want to start a branch of work

```
git checkout -b newbranch
```

I want to go back to my master branch of work

```
git checkout master
```

What branches do I have?

```
git branch
```

I need to download new stuff from “remote”

```
git fetch
```


Quick Git Commands

I want to make my local branch consistent with
“remote” master

get onto master

```
git checkout master
```

freshen up

```
git pull origin master
```

get onto branch

```
git checkout newbranch
```

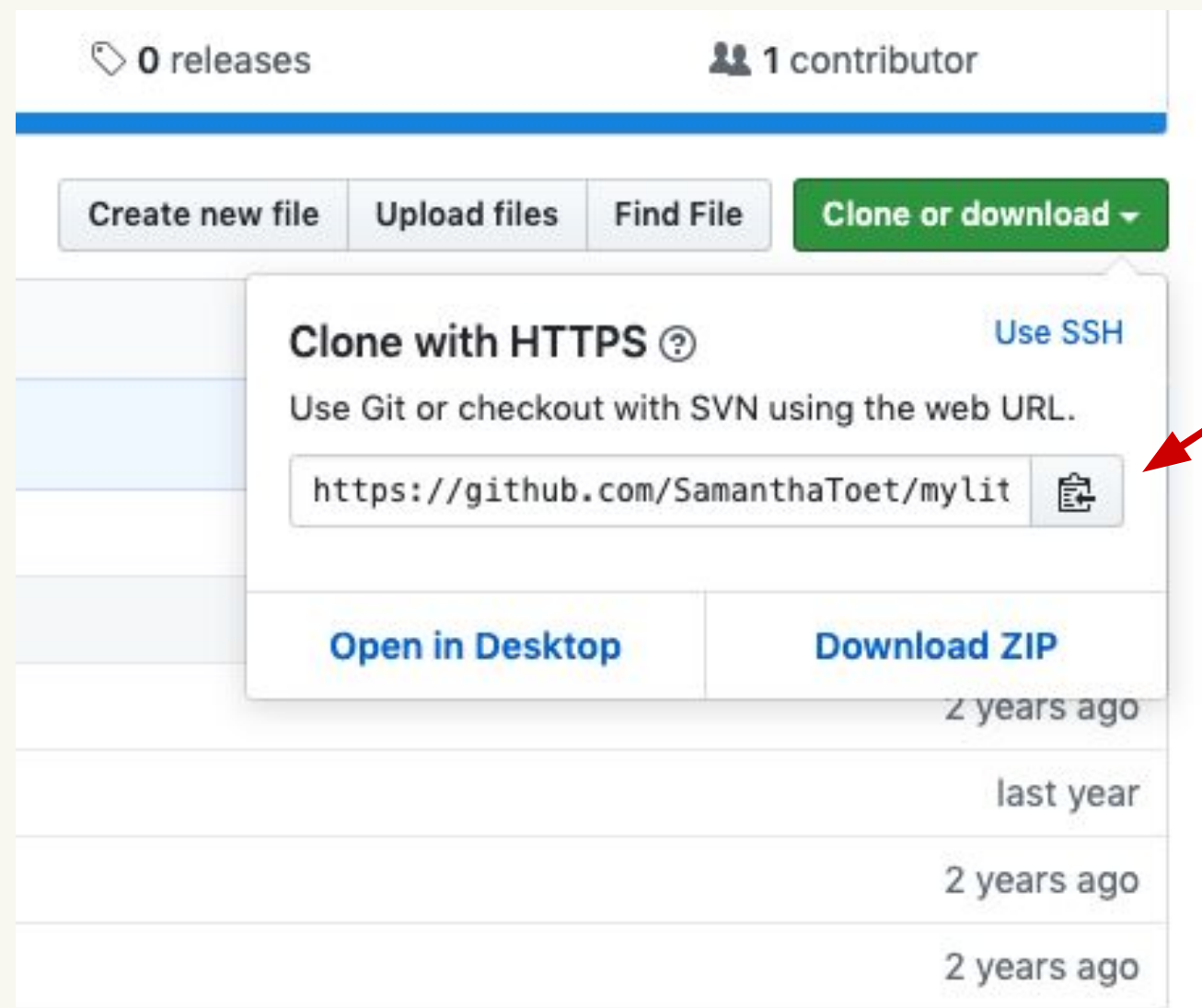
tell git to make master and branch consistent

```
git rebase master
```

My Little R Package

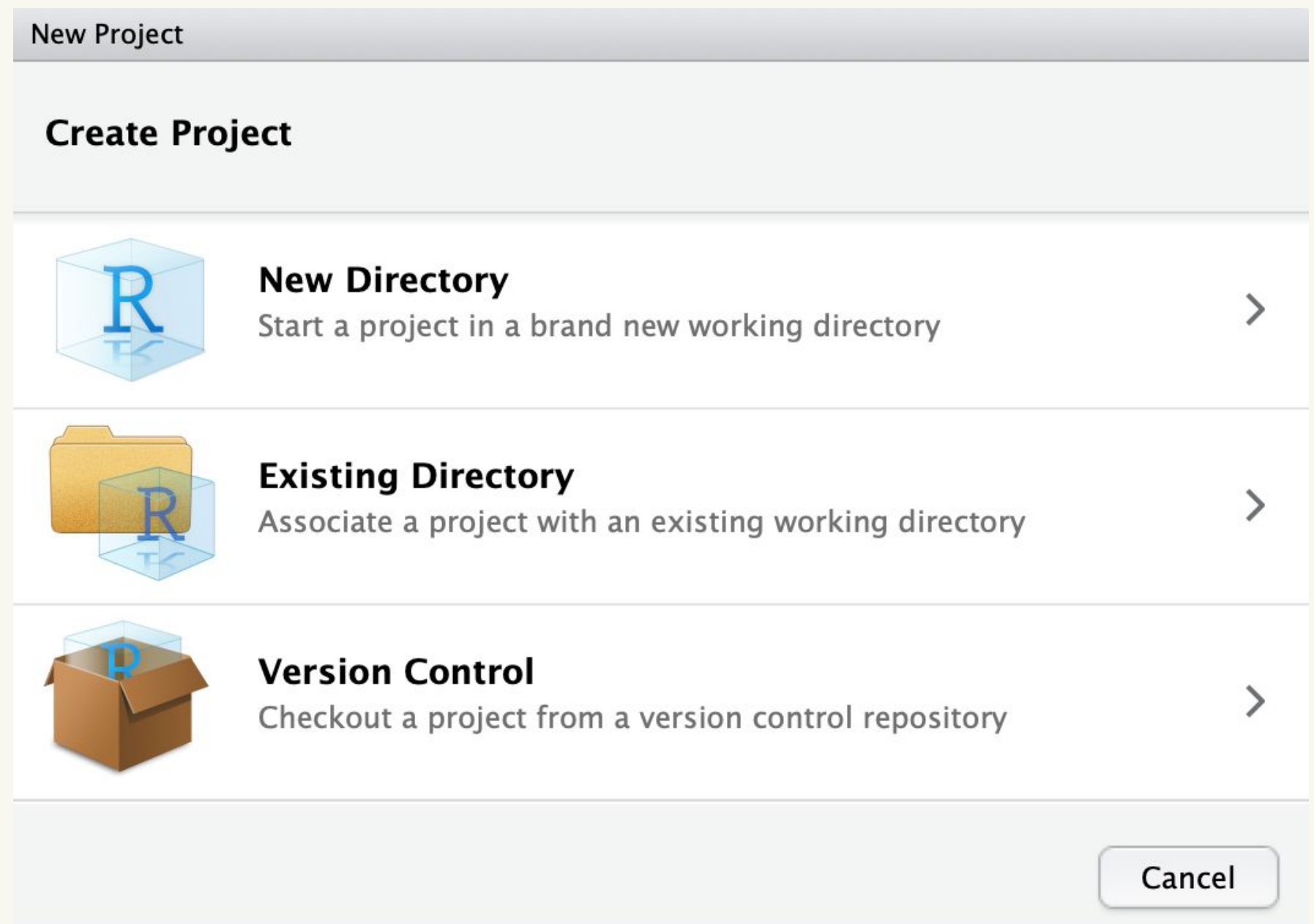
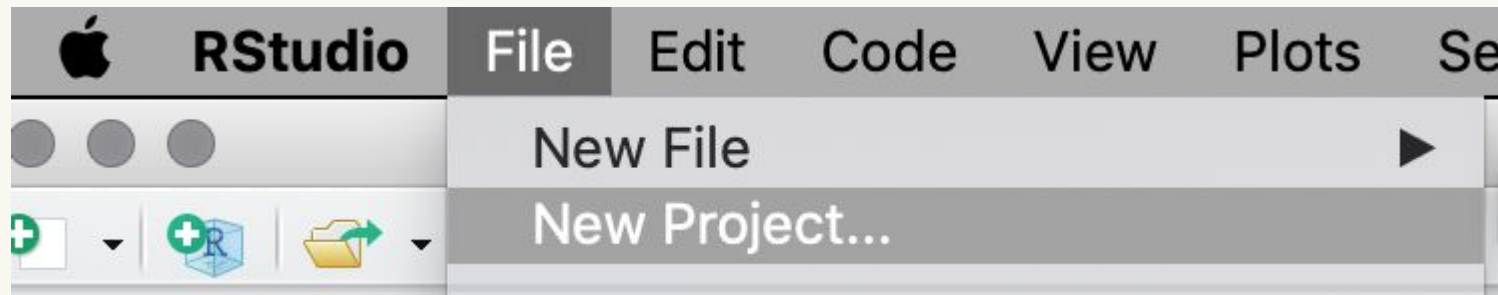


- Navigate to github.com/SamanthaToet/mylittlepony and fork it



- This link tells your computer where to find the “remote” location.

RStudio + Git = ❤️




RStudio + Git = ❤️

New Project


Back

Create Project from Version Control



Git
Clone a project from a Git repository

>




Subversion
Checkout a project from a Subversion repository

New Project

Back

Clone Git Repository



Repository URL:

Project directory name:


Create project as subdirectory of:

Browse...

☐ Open in new session

Create Project

Cancel

RStudio + Git = 

Let's look around and see how this new project works.

- Git panel
- History
- New branches

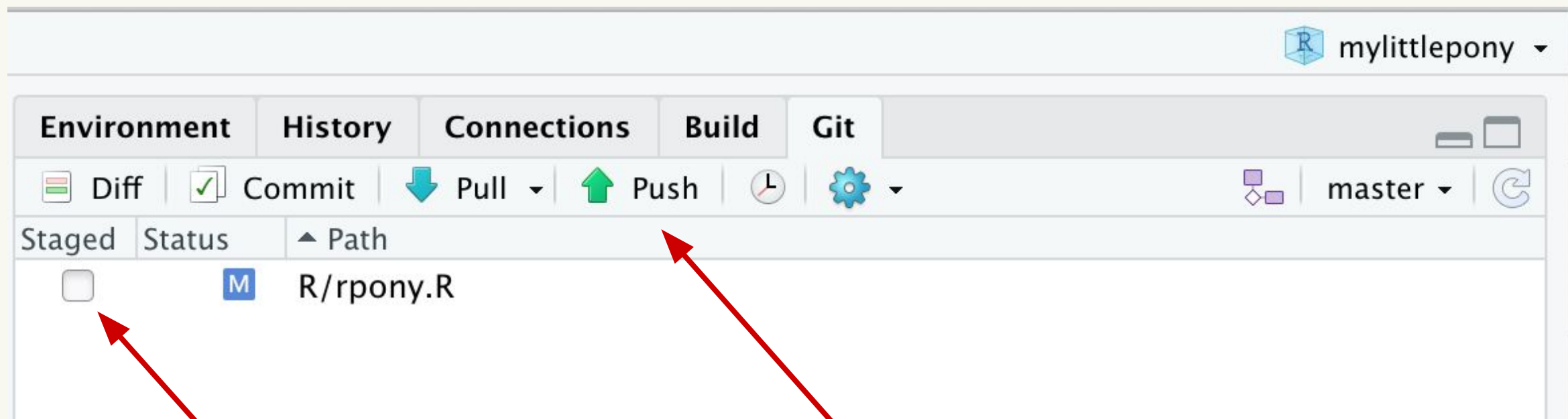
Your turn

- Open `mylittlepackage.Rproj`
 - Open `rpony.R`
 - Load all the functions, then run `rpony(10)`
 - What does it do?
-
- Uh oh! I have forgotten to include Fluttershy in the list of ponies. Add her, reload the code, and verify that your change worked.

Your Little R Package



- Upload your changes to github



- Go take a look!

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