

# Git & GitHub

*May 2018*

Forwards Teaching Team

# Use both

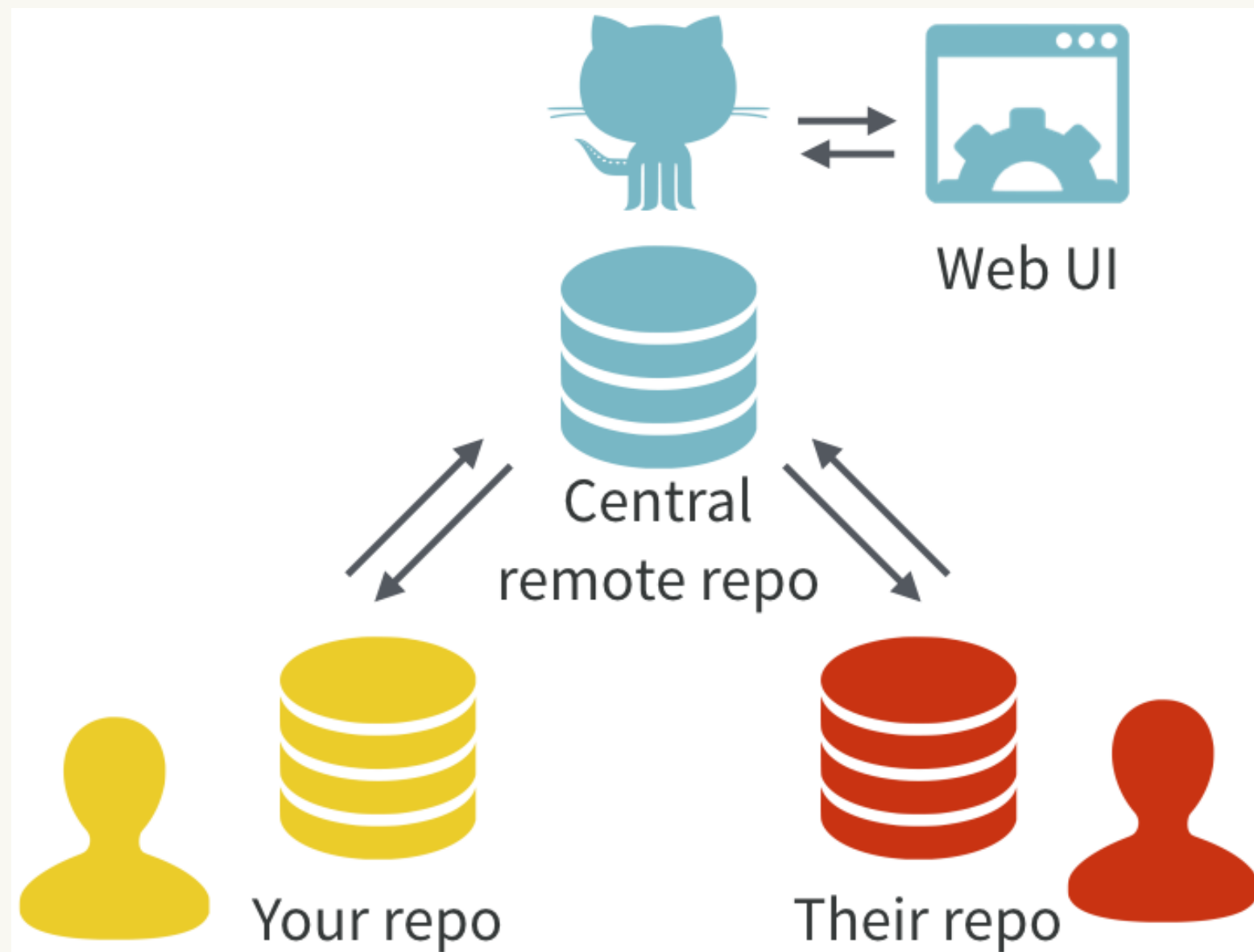
The 🙄🍰🙄 will pay off

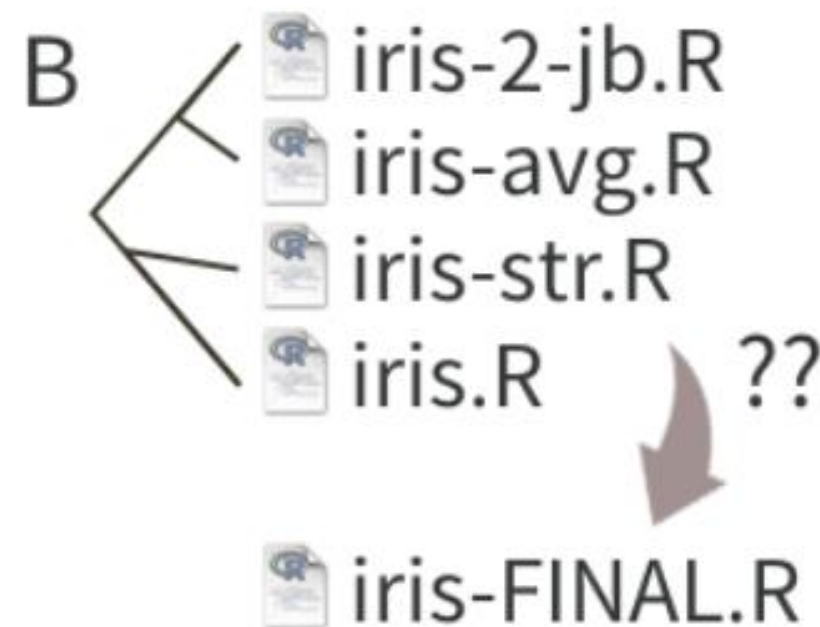
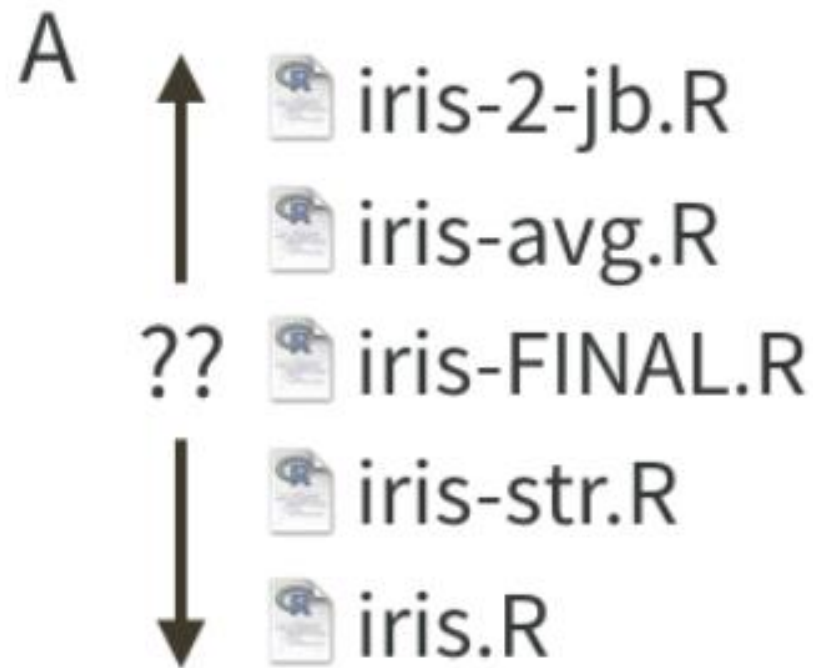


[happygitwithr.com](http://happygitwithr.com)

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

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





**draft-01** Render as report  
Formula method  
Coauthor prefers str()  
Avg by species  
Obligatory iris example



**draft-01** Render as report  
Merge branch 'formula'  
**formula** Formula method  
Coauthor prefers str()  
Merge branch 'species'  
**species** Avg by species  
Obligatory iris example



# Demo

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

# Your turn

Let's make a repo!

1. (Sign up for free and) log in to GitHub.
2. Click '+' to create a public repository
  - choose to initialize with a README
3. Click to open README.md, select pencil icon (`Edit this file`) and write a sentence or two.
4. Commit your changes with a comment.

# Demo

A look at a repo in RStudio  
(history, stage, commit, push)



# Your turn

Let's make a project in RStudio from our repo!

1. On the repo homepage click `Clone or download` and copy the URL.
2. In RStudio go to File > New Project... > Version Control > Git, paste the URL to create the project.
3. Make sure your local git knows who you are  

```
usethis::use_gitconfig(  
  scope = "project", # use "user" to set globally  
  user.name = "Jane Doe",  
  user.email = jane@example.com  
)
```
4. Add a new section to your README, stage, commit and push the change.

# Collaboration

We have already seen **issues** as a way to collaborate – but we can do more!

Through `Settings` on the GitHub repo we can add other GitHub users as collaborators.

Any GitHub user can **fork** a GitHub repo to work on it – then submit a **pull request (PR)** to propose changes to the original owner.

# Your turn

## Part 1: Create a PR on a partner's repo

1. On your partner's repo on GitHub, click `Fork`.
2. In forked repo on GitHub, click `branch:master` to create a new branch: `edit-README`.
3. Still on GitHub, edit README and commit your changes to the new branch.
4. Click on `Compare & pull request`, check your changes and create a PR.

## Part 2: Merge your partner's PR on your repo

1. Go to `Pull requests` tab on your repo, merge PR and delete branch.
2. In RStudio, do a git pull and look at git history.

# Going Further

Charlotte Wickham's Collaborative Coding talk

<http://www.cwick.co.nz/talks/collab-code-user17/#/>

Lucy D'Agostino McGowan's Shiny app to find  
beginner issues on R packages

<https://github.com/LucyMcGowan/contributr>

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