











Introduction to GitHub

Naomi Waterlow, Julian Matthewman,
Based on material by Sam Clifford and Andre Valle Campos

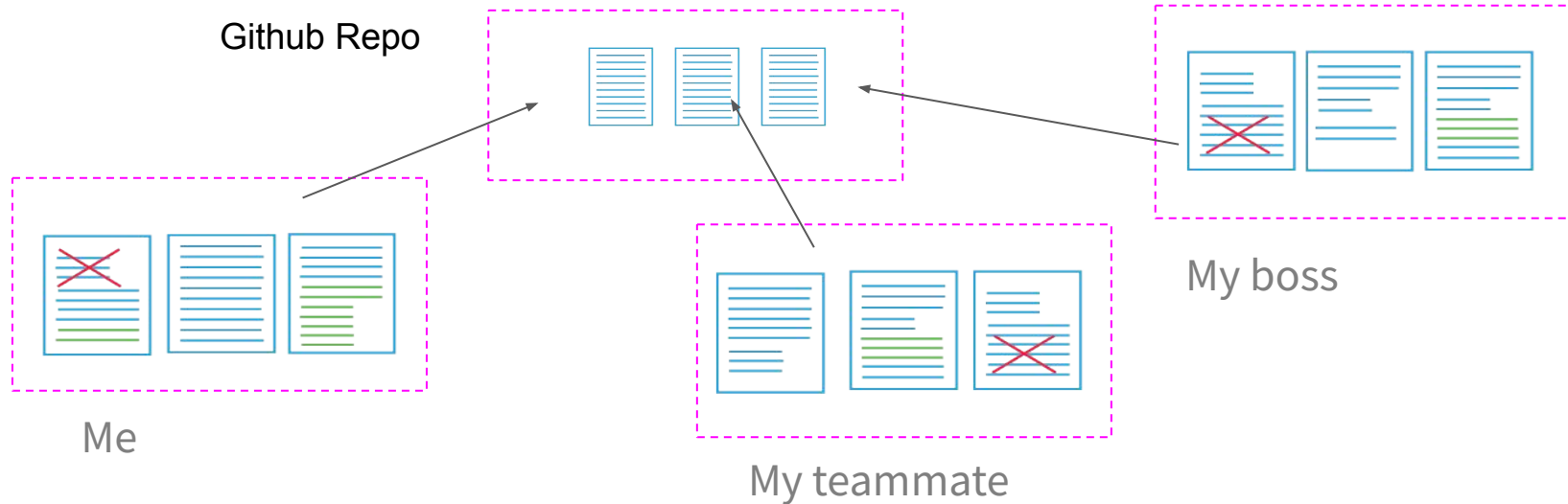
Why use GitHub?

1. Version Control

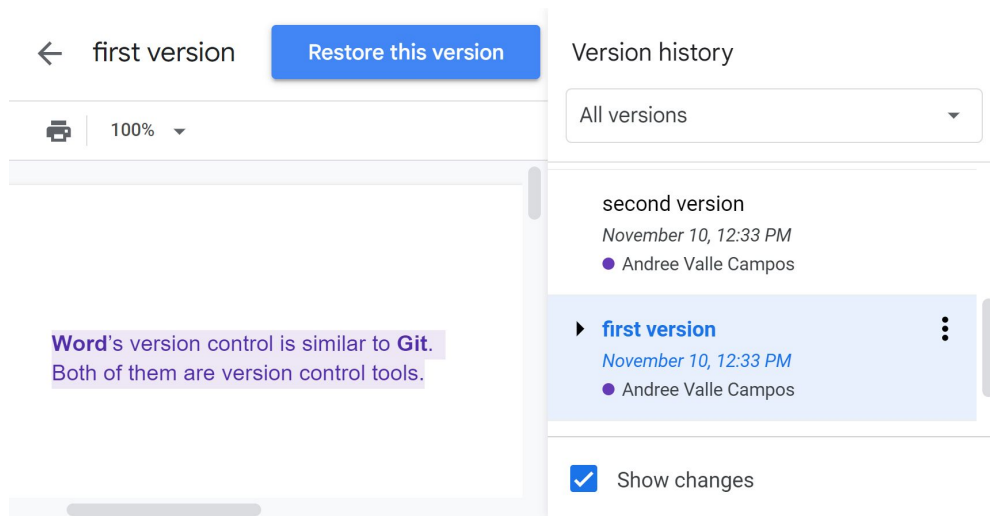
Name
 Press release for approval.doc
 Press release final.doc
 Press release FINAL VERSION.doc
 Press release FINAL FINAL VERSION.doc
 IMPROVED FINAL PRESS RELEASE.doc
 REVISED APPROVED FINAL PRESS RELEASE.doc
 REVISED APPROVED FINAL PRESS RELEASE v. 2.doc
 !! NEW REVISED APPROVED FINAL PRESS RELEASE v. 2.doc
 !!! REVISED NEW REVISED APPROVED FINAL PRESS RELEASE v. 2.doc
 !!!! Press release as sent.doc

Why use GitHub?

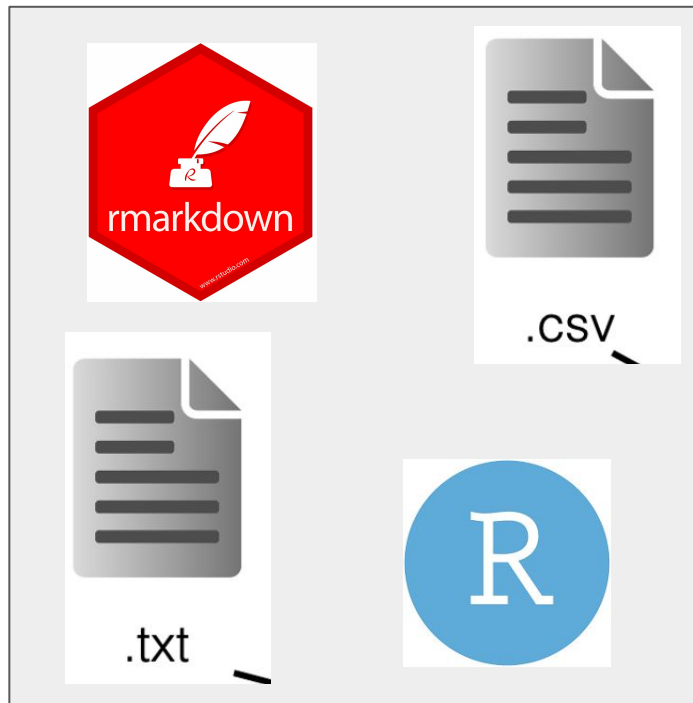
2. Facilitates Collaboration and makes contributions transparent



A bit like google docs?



PLAIN text files



Let's look at an example

The screenshot shows a GitHub repository page for 'NaomiWaterlow/prescription_foi'. The repository is public and has 0 stars, 0 forks, and 2 watchers. The main branch is 'main'. The repository contains 11 files and 66 commits. The files are listed in a table with their names, descriptions, and the time since the last commit.

File Name	Description	Time since last commit
data	Population data	6 months ago
plots	CHanged legend to fit	6 months ago
unused_code	Reorganise so can add sensitivity analyses	6 months ago
.DS_Store	Combine and format data	8 months ago
.gitignore	Reorganise so can add sensitivity analyses	6 months ago
0_master_script.R	updated plots following paper comments	6 months ago
0a_combine_data_ICB.R	Minor edits to stop warnings about NA coming thru	6 months ago
0b_combine_data_practice.R	added suppression of warnings for when intentionally con...	6 months ago
0c_pop_data_2023_ICBs.R	Updated to all populations from same file, and specifying ...	6 months ago
1_initial_data_look_total.R	Merge branch 'main' of https://github.com/NaomiWaterlow/prescription_foi	6 months ago
1a_initial_data_look_by_ICB.R	Reorganise so can add sensitivity analyses	6 months ago
2a_STARPU.R	Ran everything with updated figure code etc.	6 months ago
2b_STARPU_applied.R	updated plots following paper comments	6 months ago
3_AWARE.R	Added aware by ICB	6 months ago

The right sidebar contains sections for 'About' (No description, website, or topics provided), 'Releases' (No releases published, [Create a new release](#)), 'Packages' (No packages published, [Publish your first package](#)), 'Contributors' (2 contributors: NaomiWaterlow, gwenknight), and 'Languages'.

Let's look at an example

The screenshot shows a web browser displaying the GitHub repository page for 'NaomiWaterlow/prescription_foi'. The browser's address bar shows the URL 'https://github.com/NaomiWaterlow/prescription_foi'. The repository name 'NaomiWaterlow / prescription_foi' is highlighted with an orange box. The repository is public and has 2 unwatchers, 0 forks, and 0 stars. The main branch is 'main'. The repository contains a table of files and their commit history. The right sidebar shows the repository's description, activity, and contributors.

NaomiWaterlow / prescription_foi

prescription_foi Public

main 1 Branch 0 Tags

Go to file Add file <> Code

NaomiWaterlow	Update README.md	861b06a · 4 months ago	66 Commits
data	Population data	6 months ago	
plots	CHanged legend to fit	6 months ago	
unused_code	Reorganise so can add sensitivity analyses	6 months ago	
.DS_Store	Combine and format data	8 months ago	
.gitignore	Reorganise so can add sensitivity analyses	6 months ago	
0_master_script.R	updated plots following paper comments	6 months ago	
0a_combine_data_ICB.R	Minor edits to stop warnings about NA coming thru	6 months ago	
0b_combine_data_practice.R	added suppression of warnings for when intentionally con...	6 months ago	
0c_pop_data_2023_ICBs.R	Updated to all populations from same file, and specifying ...	6 months ago	
1_initial_data_look_total.R	Merge branch 'main' of https://github.com/NaomiWaterlo...	6 months ago	
1a_initial_data_look_by_ICB.R	Reorganise so can add sensitivity analyses	6 months ago	
2a_STARPU.R	Ran everything with updated figure code etc.	6 months ago	
2b_STARPU_applied.R	updated plots following paper comments	6 months ago	
3_AWARE.R	Added aware by ICB	6 months ago	

About

No description, website, or topics provided.

Readme

Activity

0 stars

2 watching

0 forks

Releases

No releases published

Create a new release

Packages

No packages published

Publish your first package

Contributors 2

NaomiWaterlow

gwenknight Gwen Knight

Languages

Let's look at an example

NaomiWaterlow / prescription_foi

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

Files

main

Go to file

- data
- plots
- unused_code
 - .DS_Store
 - .gitignore
 - 0_master_script.R
 - 0a_combine_data_ICB.R
 - 0b_combine_data_practice.R
 - 0c_pop_data_2023_ICBs.R
 - 1_initial_data_look_total.R
 - 1a_initial_data_look_by_ICB.R
 - 2a_STARPU.R
 - 2b_STARPU_applied.R
 - 3_AWARE.R
 - 4a_RTI.R
 - 4b_beta_lactams.R
 - Appendix2.Rmd
 - Appendix2.html
 - Appendix2.pdf
 - README.md

prescription_foi / 0_master_script.R

NaomiWaterlow updated plots following paper comments 9037e88 · 6 months ago History

Code Blame 67 Lines (48 loc) · 2.43 KB Code 55% faster with GitHub Copilot

```
1 ##### Master script #####
2 ##### July 2024 #####
3 ##### Authors: Naomi Waterlow & Gwen Knight #####
4 #####
5
6 # load required libraries
7 library(purrr)
8 library(stringr)
9 library(data.table)
10 library(ggplot2)
11 library(scales)
12 library(gridExtra)
13 library(ggpubr)
14 library(tidyverse)
15
16 #check we have appropriate folders for storing
17 if(!file.exists("plots")){dir.create(file.path("plots/"))}
18 if(!file.exists("data")){dir.create(file.path("data/"))}
19 if(!file.exists("tables")){dir.create(file.path("tables/"))}
20
21
22 # choose which version to run for sensitivity of *s
23 # Options are:
24 # "default_1" - stars set to 1
25 # "sens_4" - stars set to 4
26 # "m4_f1" - if male, stars set to 4, if female stars set to 1. Unknowns/Indeterminate set to 0
27 # "20_cutoff" - if 20 or under, stars set to 4, if over 20 stars set to 1. Unknowns set to 0
28 sensitivity_choice <- "default_1"
29 # if you want to create a new sensitivity analysis, it needs to be altered in scripts 0a, 0b and 1.
30
31 if(!file.exists(paste0("plots/", sensitivity_choice))){dir.create(file.path(paste0("plots/", sensitivity_choice)))}
```

Let's look at an example

Commits

History for `prescription_foi` / `0_master_script.R` on `main`

🔍 All users ▾

📅 All time ▾

🔊 Commits on Jul 23, 2024

updated plots following paper comments

👤 NaomiWaterlow committed on Jul 23, 2024

9037e88   

🔊 Commits on Jul 22, 2024

Ran everything with updated figure code etc.

👤 NaomiWaterlow committed on Jul 22, 2024

48d7d80   

🔊 Commits on Jul 17, 2024

add in tables

👤 gwenknight committed on Jul 17, 2024

56703f6   

Minor changes to "if file.exists" to stop warning errors

👤 gwenknight committed on Jul 17, 2024

32770c3   

🔊 Commits on Jul 16, 2024

finished making plots and reordered factor

Let's look at an example

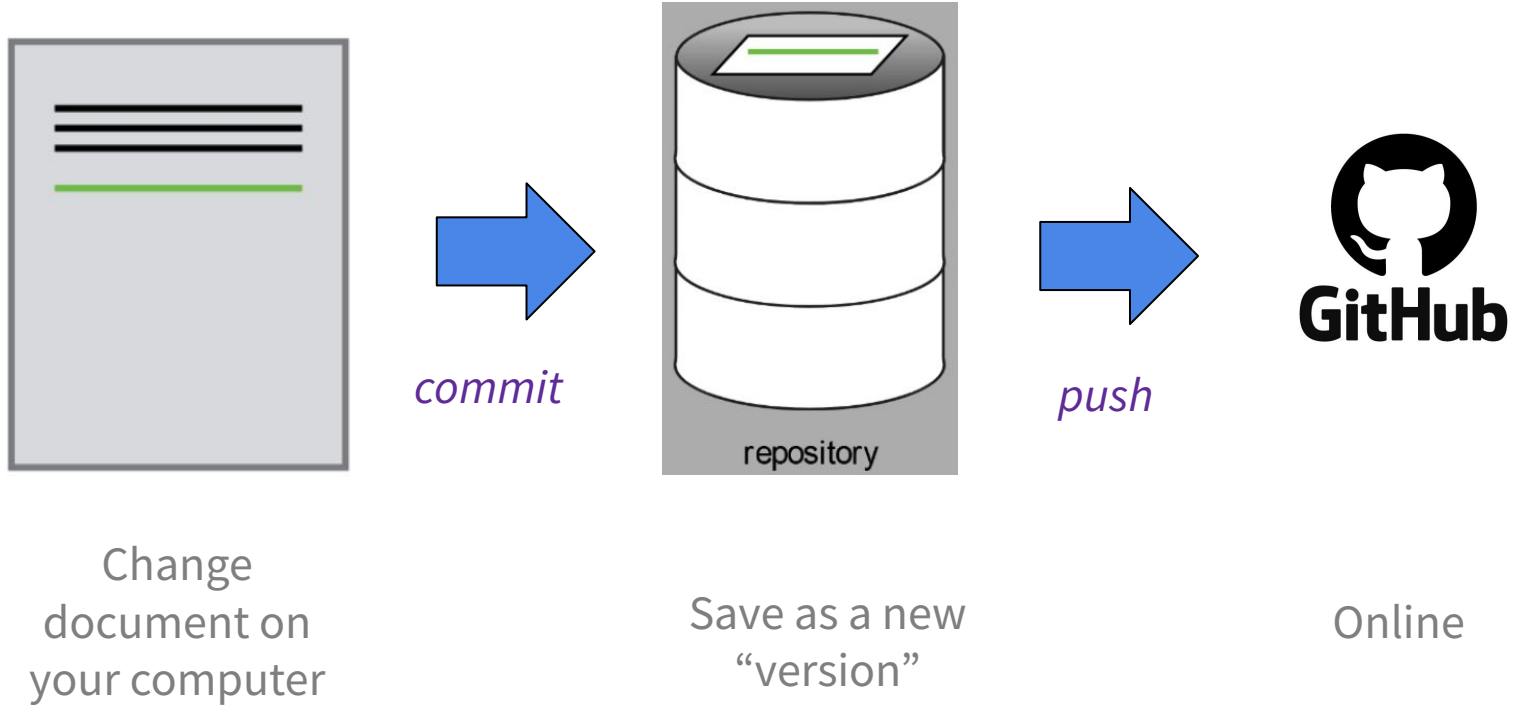


1 file changed +2 -0 lines changed

0_master_script.R

```
@@ -11,10 +11,12 @@ library(ggplot2)
11 11 library(scales)
12 12 library(gridExtra)
13 13 library(ggpubr)
14 + library(tidyverse)
14 15
15 16 #check we have appropriate folders for storing
16 17 if(!file.exists("plots")){dir.create(file.path("plots/"))}
17 18 if(!file.exists("data")){dir.create(file.path("data/"))}
19 + if(!file.exists("tables")){dir.create(file.path("tables/"))}
18 20
19 21
20 22 # choose which version to run for sensitivity of *s
```

How does it work?



Many ways to do it...

- Command line

<https://epiverse-trace.github.io/git-rstudio-basics/>

- GitHub Desktop

- Rstudio

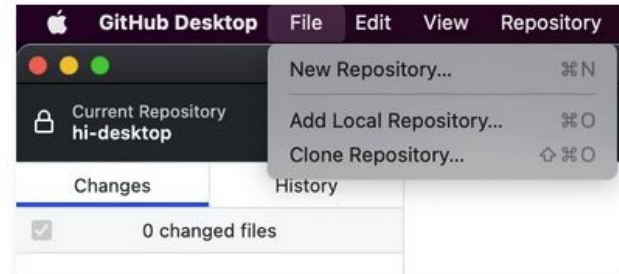
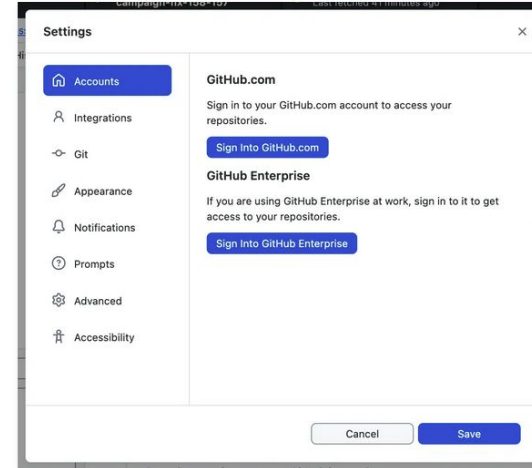
-



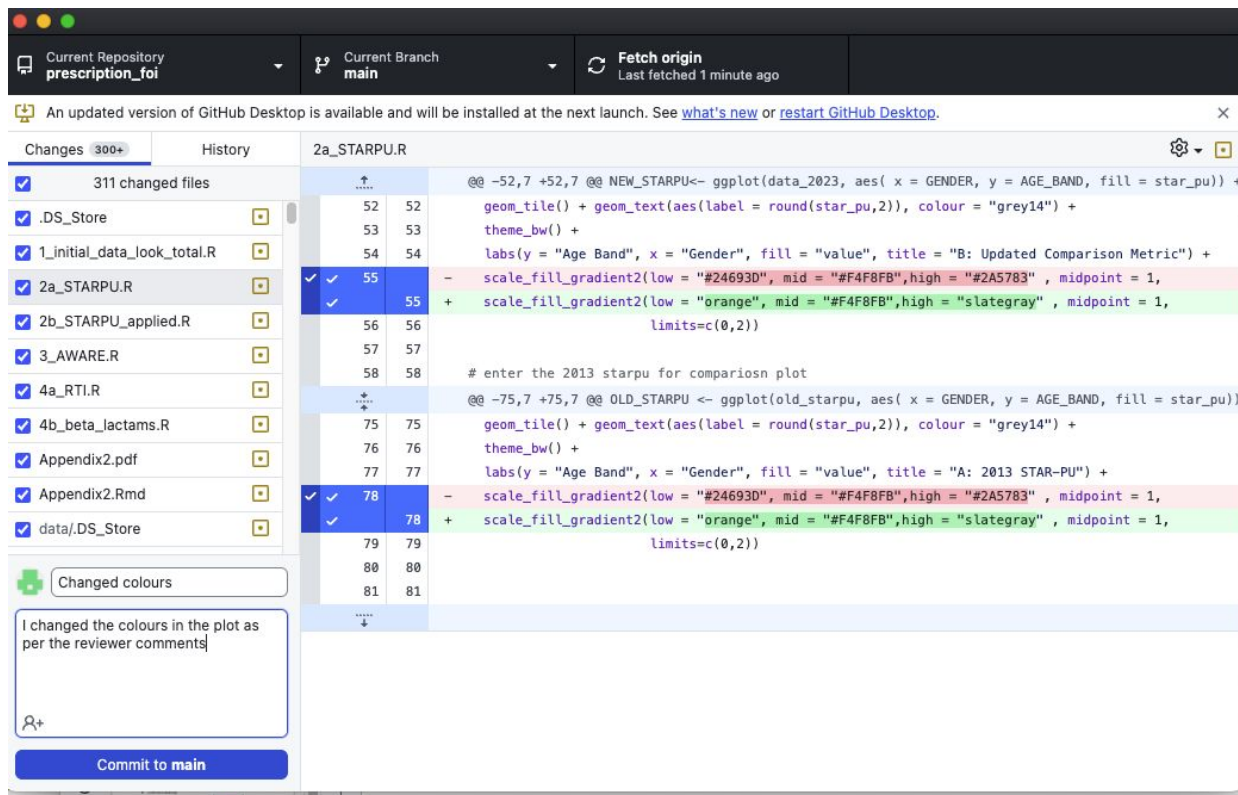
Using GitHub Desktop

1. Download
2. Sign-in
3. Get your repositories!

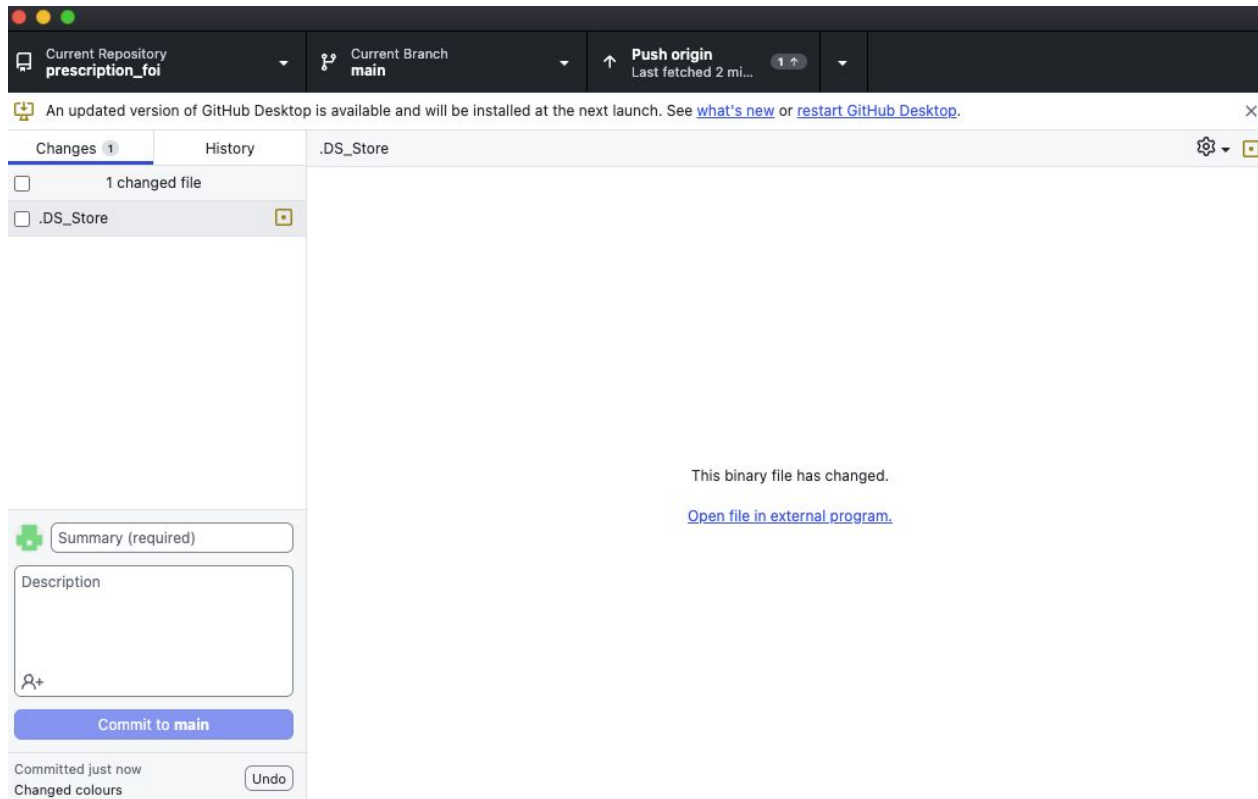
<https://desktop.github.com/download/>



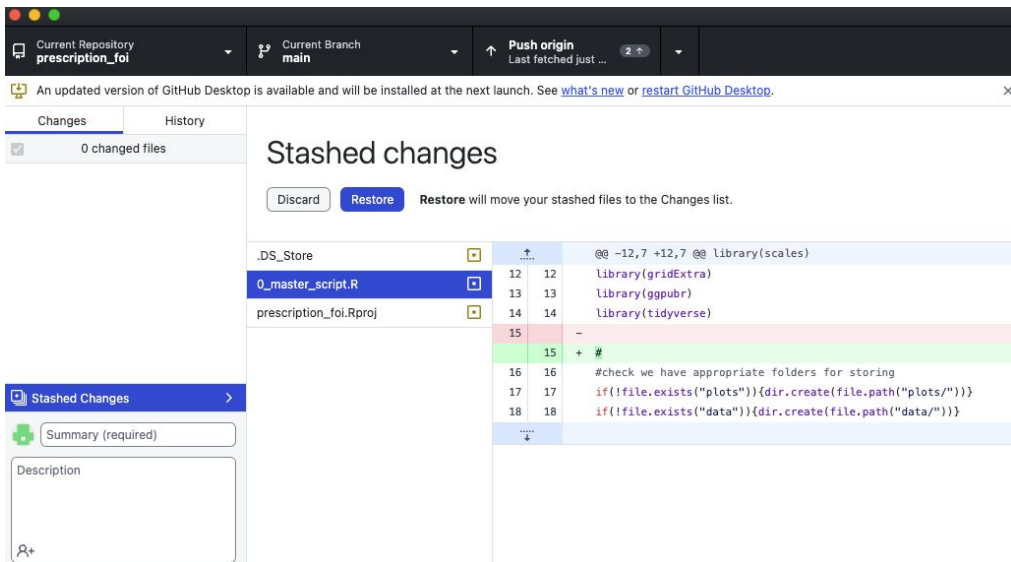
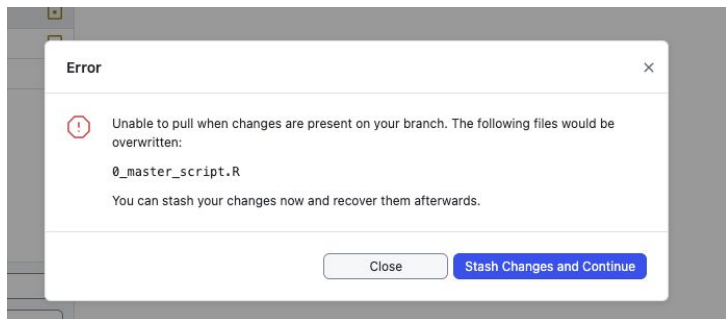
Using Github Desktop - an example



Using Github Desktop - an example



I changed something on the online version and then the same line in my desktop version, at the same time! And then I tried to commit...



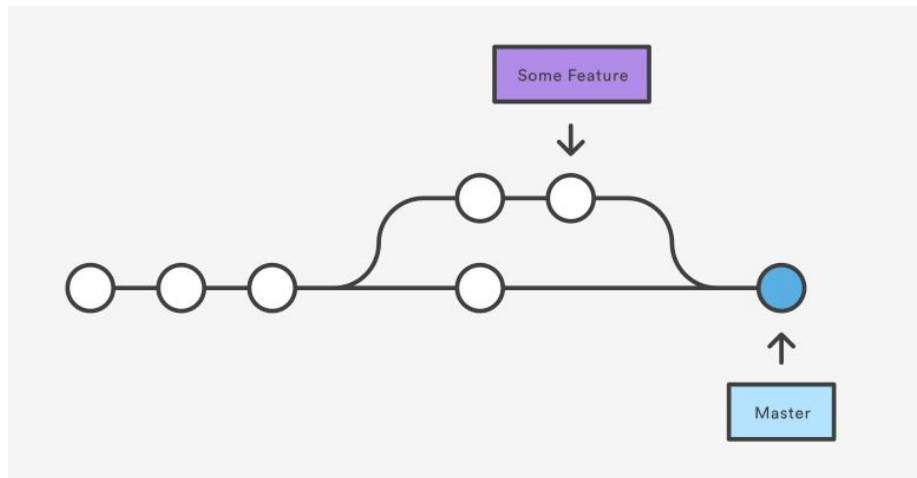
Repository settings

- Add **collaborators**
- Make public / private
- Rename, delete etc.

The screenshot shows the GitHub repository settings page for the repository 'NaomiWaterlow / prescription_foi'. The 'Settings' tab is selected in the top navigation bar. On the left, a sidebar lists various settings categories: General, Access (Collaborators, Moderation options), Code and automation (Branches, Tags, Rules, Actions, Webhooks, Environments, Codespaces, Pages), Security (Code security, Deploy keys, Secrets and variables), and Integrations (GitHub Apps, Email notifications). The 'General' tab is active, displaying the following settings:

- Repository name:** 'prescription_foi' with a 'Rename' button.
- Template repository:** An unchecked checkbox. Description: 'Template repositories let users generate new repositories with the same directory structure and files. [Learn more about template repositories.](#)'
- Require contributors to sign off on web-based commits:** An unchecked checkbox. Description: 'Enabling this setting will require contributors to sign off on commits made through GitHub's web interface. Signing off is a way for contributors to affirm that their commit complies with the repository's terms, commonly the [Developer Certificate of Origin \(DCO\)](#). [Learn more about signing off on commits.](#)'
- Default branch:** 'main' with an 'Edit' button. Description: 'The default branch is considered the "base" branch in your repository, against which all pull requests and code commits are automatically made, unless you specify a different branch.'
- Social preview:** An 'Edit' button. Description: 'Upload an image to customize your repository's social media preview. Images should be at least 640x320px (1280x640px for best display). [Download template](#)'

Branches



<https://www.atlassian.com/git/tutorials/using-branches/git-merge>

The screenshot shows the GitHub interface for the repository 'joeyklee / learning'. The repository is for 'planning and working on Science Lab learning materials'. It has 38 commits, 3 branches, and 0 releases. A blue box highlights the 'New pull request' button and the 'Create branch: revise-code-of-conduct from master' option. The repository contains files like code-of-conduct.md, resource-template.md, talk-guidelines.md, and README.md. The latest commit is 28923a5, 16 hours ago.