

# Linking GitHub & R

ENTMLGY 6707

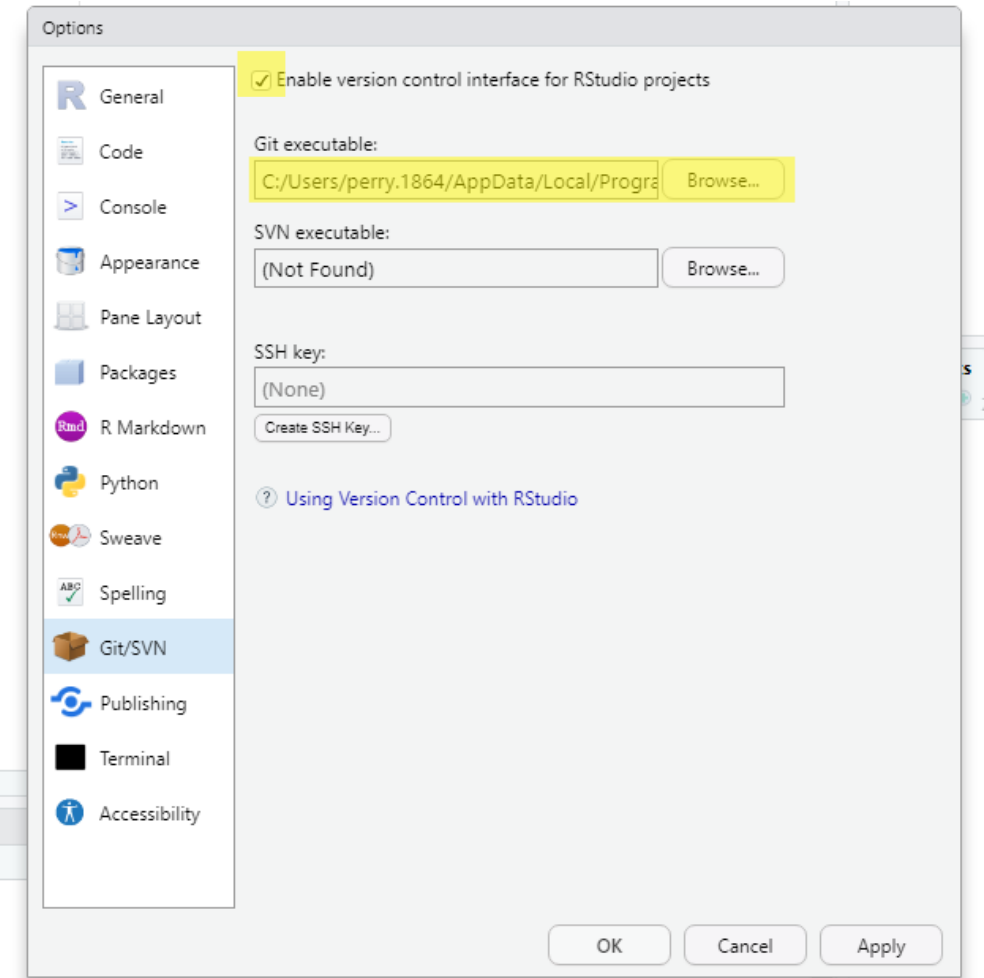
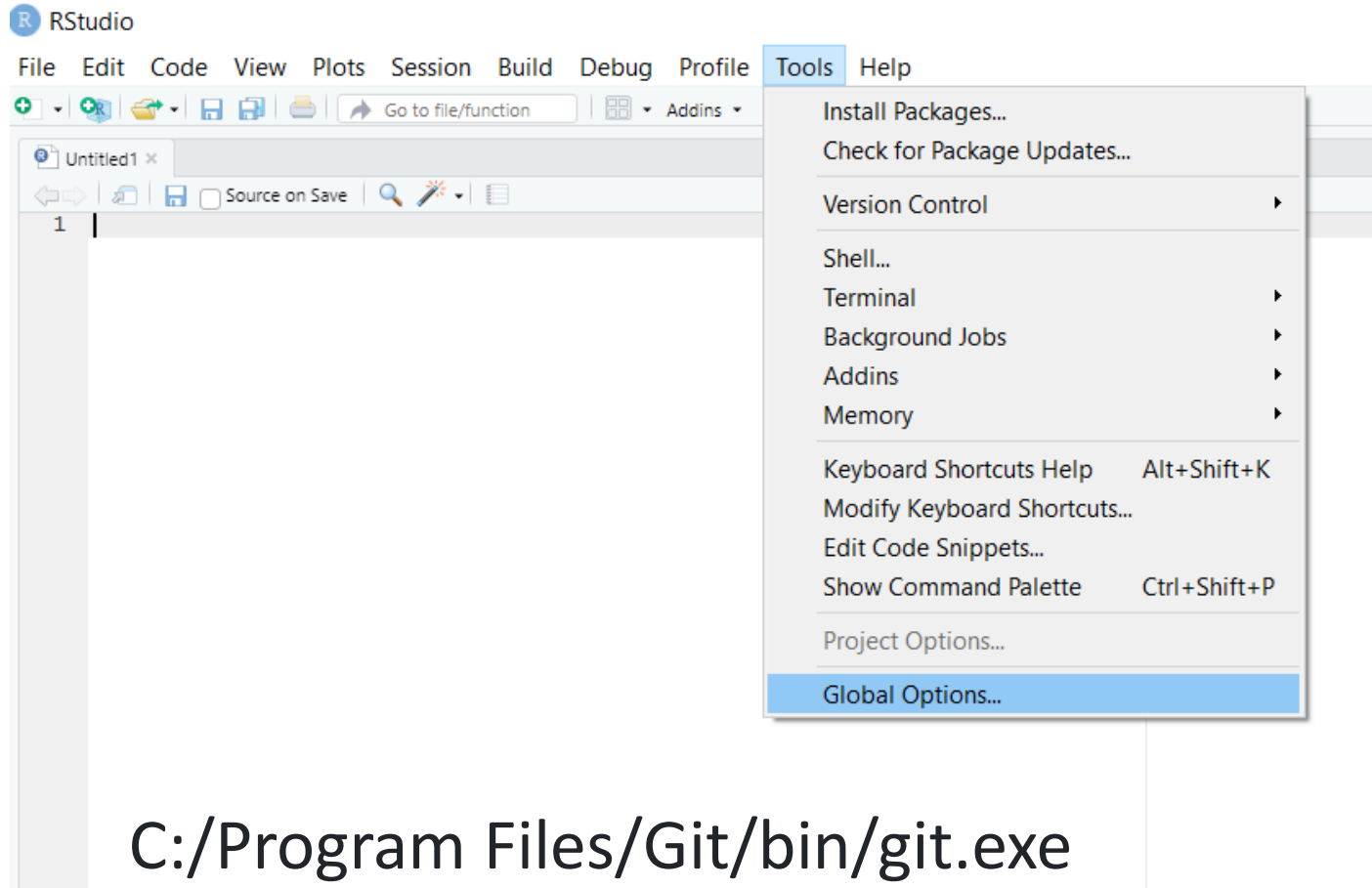
Entomological Techniques and Data Analysis



# Integrate Git in RStudio

1) Check enable version control

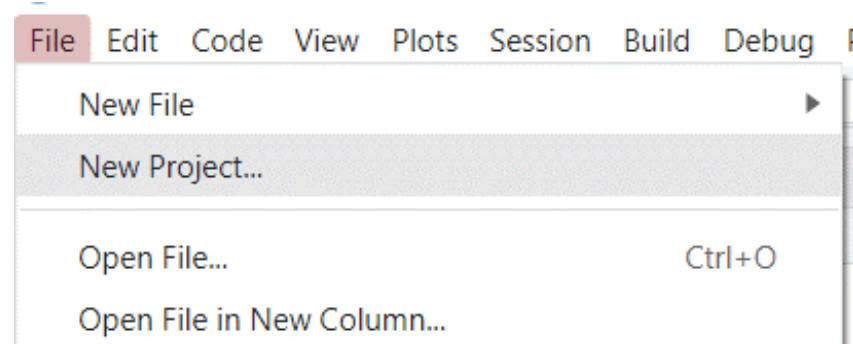
2) Set path to git.exe file



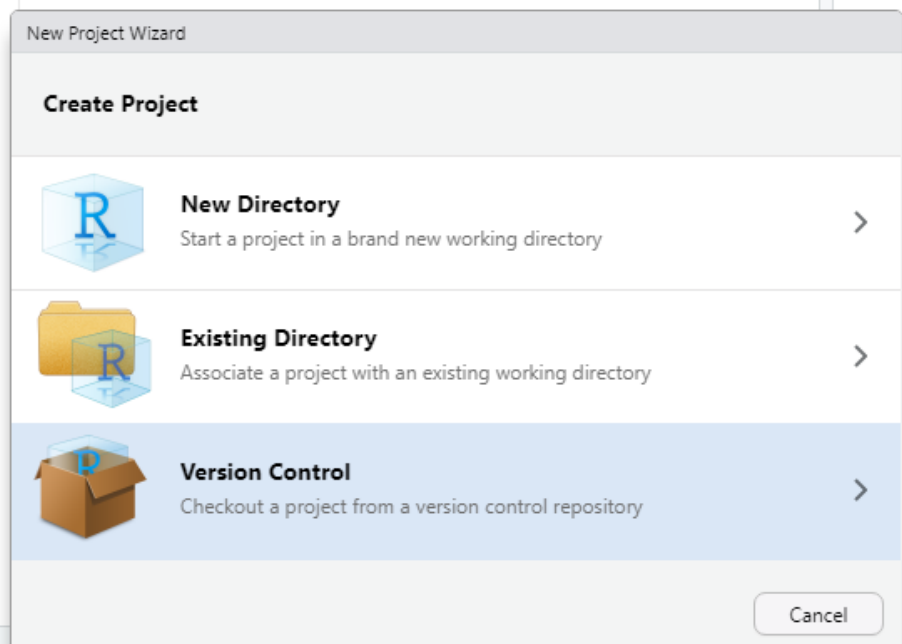
C:/Program Files/Git/bin/git.exe

# Check to make sure Git and RStudio are linked

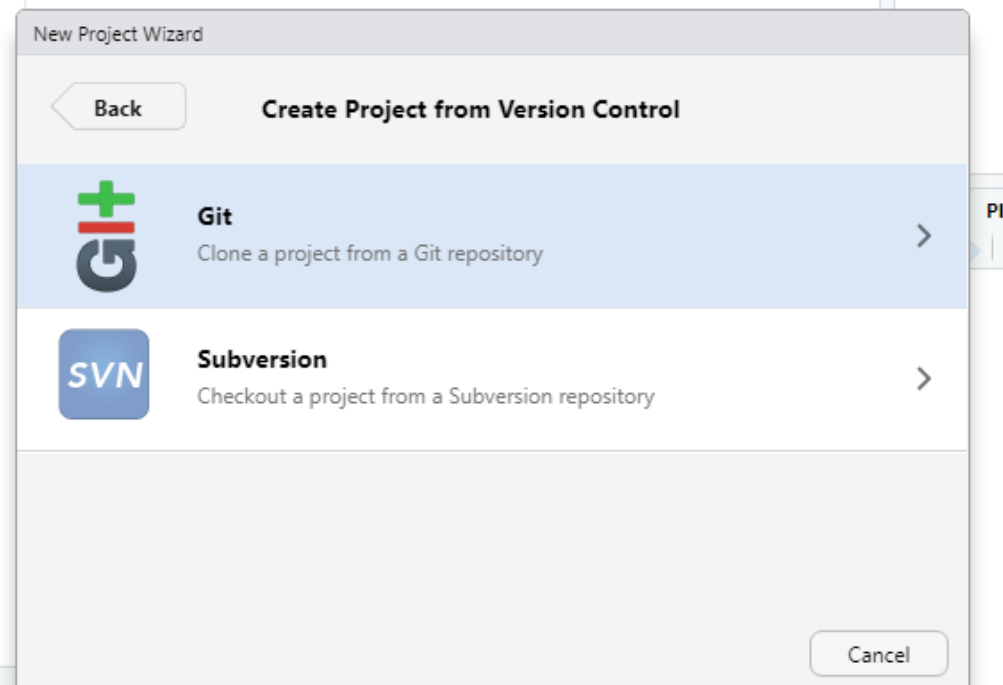
1



2



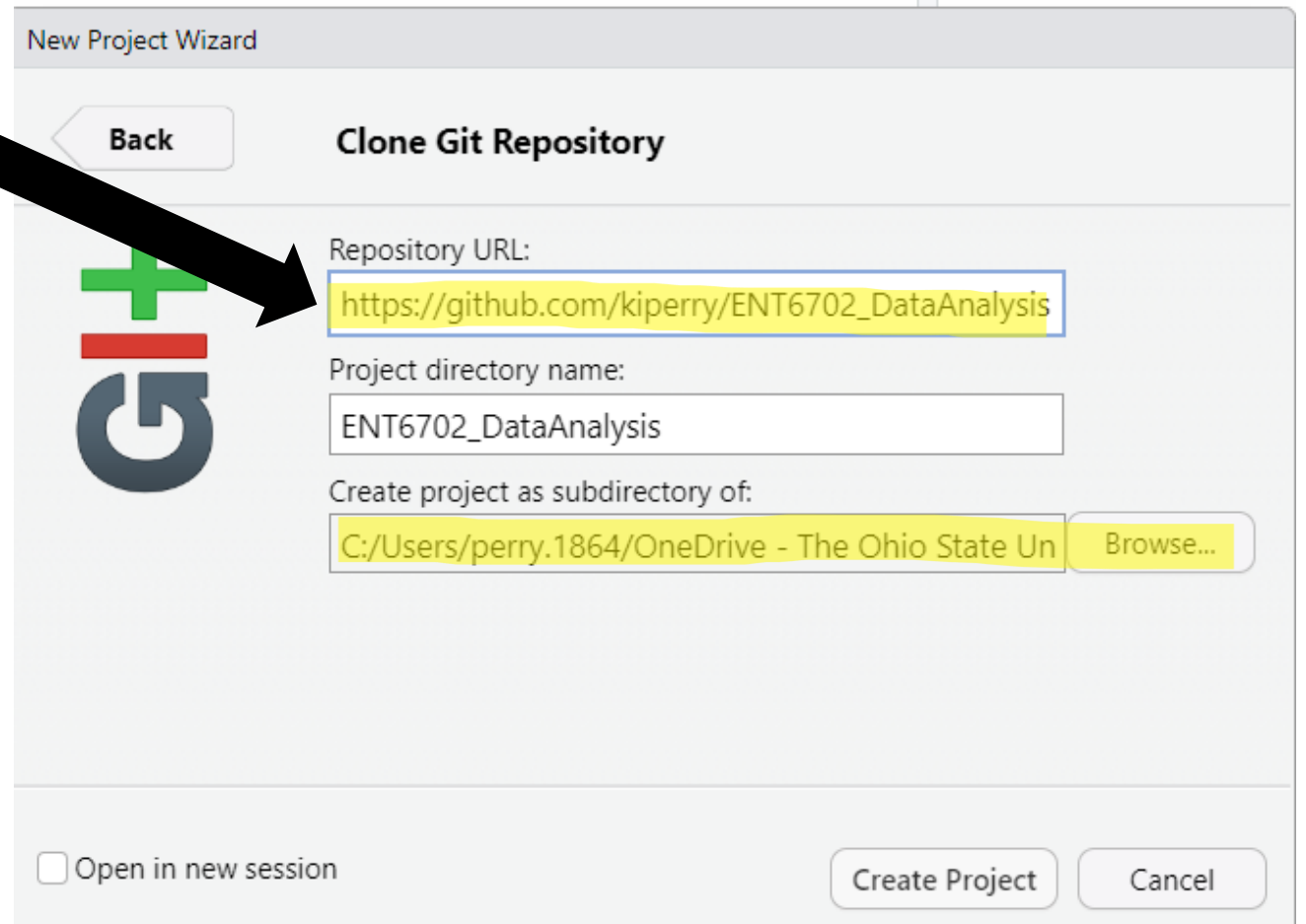
3



# Clone a repository on GitHub to your computer

Copy and paste repo link

ENT6707\_DataAnalysis



New Project Wizard

Back Clone Git Repository

Repository URL:  
`https://github.com/kiperry/ENT6702_DataAnalysis`

Project directory name:  
ENT6702\_DataAnalysis

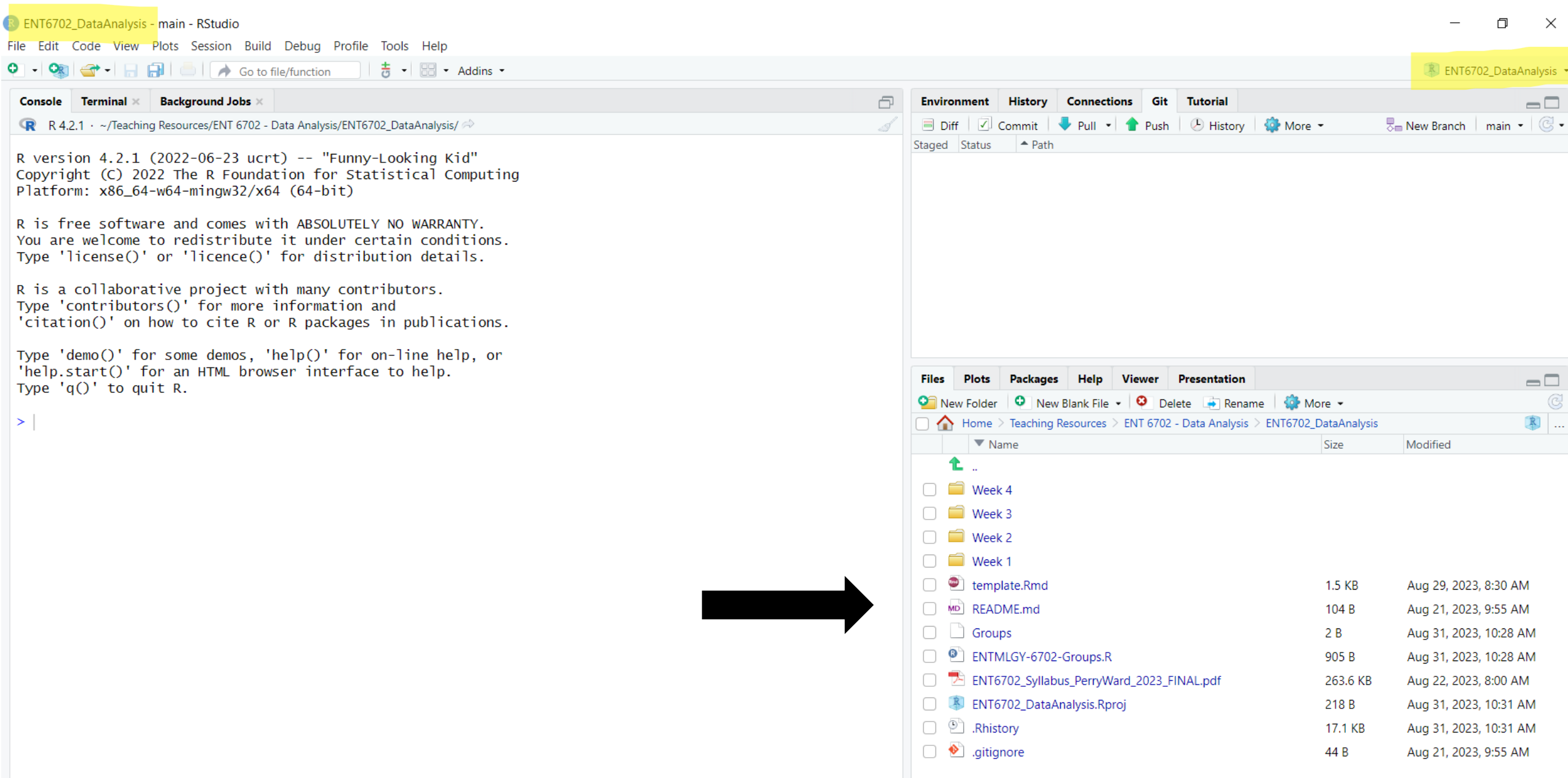
Create project as subdirectory of:  
`C:/Users/perry.1864/OneDrive - The Ohio State Un` Browse...

☐ Open in new session

Create Project Cancel

`https://github.com/kiperry/ENT6707_DataAnalysis`

# Clone a repository on GitHub to your computer



The image shows the RStudio interface with the 'ENT6702\_DataAnalysis' repository cloned to the local machine. The console displays the R version and copyright information. The file explorer on the right shows the directory structure, including folders for 'Week 1' through 'Week 4' and various files like 'template.Rmd', 'README.md', 'Groups', 'ENTMLGY-6702-Groups.R', 'ENT6702\_Syllabus\_PerryWard\_2023\_FINAL.pdf', 'ENT6702\_DataAnalysis.Rproj', '.Rhistory', and '.gitignore'.

**RStudio Console Output:**

```
R version 4.2.1 (2022-06-23 ucrt) -- "Funny-Looking Kid"
Copyright (C) 2022 The R Foundation for Statistical Computing
Platform: x86_64-w64-mingw32/x64 (64-bit)

R is free software and comes with ABSOLUTELY NO WARRANTY.
You are welcome to redistribute it under certain conditions.
Type 'license()' or 'licence()' for distribution details.

R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.

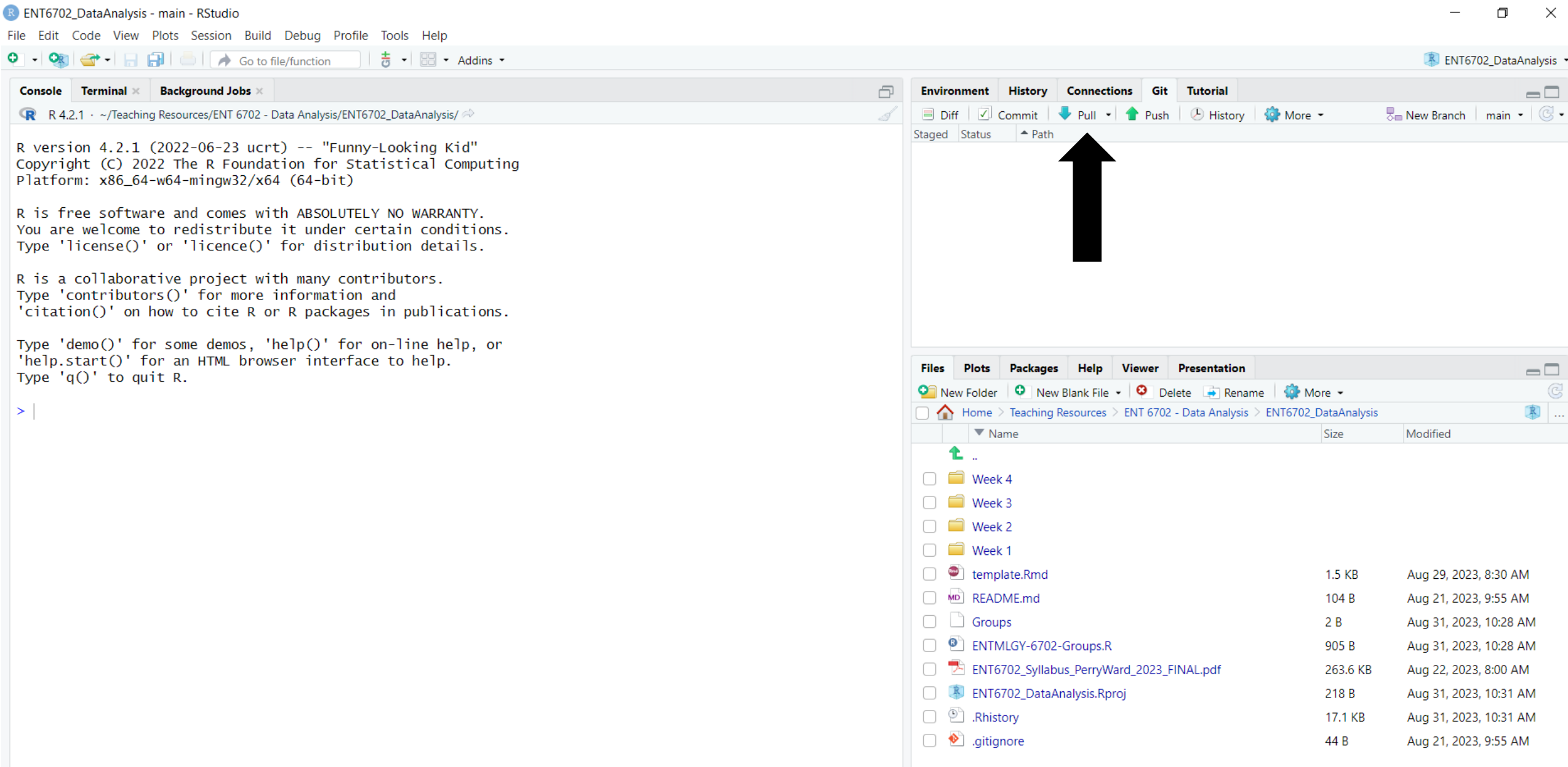
Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Type 'q()' to quit R.

> |
```

**File Explorer (ENT6702\_DataAnalysis):**

Name	Size	Modified
..		
Week 4		
Week 3		
Week 2		
Week 1		
template.Rmd	1.5 KB	Aug 29, 2023, 8:30 AM
README.md	104 B	Aug 21, 2023, 9:55 AM
Groups	2 B	Aug 31, 2023, 10:28 AM
ENTMLGY-6702-Groups.R	905 B	Aug 31, 2023, 10:28 AM
ENT6702_Syllabus_PerryWard_2023_FINAL.pdf	263.6 KB	Aug 22, 2023, 8:00 AM
ENT6702_DataAnalysis.Rproj	218 B	Aug 31, 2023, 10:31 AM
.Rhistory	17.1 KB	Aug 31, 2023, 10:31 AM
.gitignore	44 B	Aug 21, 2023, 9:55 AM

# Open R project and pull changes to your computer



The screenshot shows the RStudio interface with the following components:

- Terminal:** Displays R version 4.2.1 (2022-06-23 ucrt) -- "Funny-Looking Kid" and copyright information. It also shows instructions for using R, such as `license()`, `contributors()`, and `demo()`.
- Environment/History/Connections/Git/Tutorial:** The **Connections** tab is active, showing a **Pull** button with a downward arrow. A large black arrow points to this button.
- Files:** The **Files** tab is active, showing a file explorer view of the project directory. The file list includes:

Name	Size	Modified
..		
Week 4		
Week 3		
Week 2		
Week 1		
template.Rmd	1.5 KB	Aug 29, 2023, 8:30 AM
README.md	104 B	Aug 21, 2023, 9:55 AM
Groups	2 B	Aug 31, 2023, 10:28 AM
ENTMLGY-6702-Groups.R	905 B	Aug 31, 2023, 10:28 AM
ENT6702_Syllabus_PerryWard_2023_FINAL.pdf	263.6 KB	Aug 22, 2023, 8:00 AM
ENT6702_DataAnalysis.Rproj	218 B	Aug 31, 2023, 10:31 AM
.Rhistory	17.1 KB	Aug 31, 2023, 10:31 AM
.gitignore	44 B	Aug 21, 2023, 9:55 AM

# You can clone any public repositories on GitHub

However, only collaborators can make changes (via commit & push)

The screenshot shows the GitHub repository settings page for 'kiperry / OSU\_Statistics\_Workshops'. The 'Settings' tab is selected in the top navigation bar. On the left sidebar, the 'Collaborators' section is highlighted under the 'Access' category. The main content area is titled 'Who has access' and shows two sections: 'PUBLIC REPOSITORY' and 'DIRECT ACCESS'. The 'PUBLIC REPOSITORY' section states 'This repository is public and visible to anyone.' and has a 'Manage' link. The 'DIRECT ACCESS' section states '0 collaborators have access to this repository. Only you can contribute to this repository.' Below this, the 'Manage access' section shows a message 'You haven't invited any collaborators yet' with an 'Add people' button highlighted in yellow.

kiperry / OSU\_Statistics\_Workshops Public

<> Code Issues Pull requests Actions Projects Wiki Security Insights Settings

General

Access

Collaborators

Moderation options

Code and automation

Branches

Tags

Actions

Webhooks

Environments

Codespaces

Pages

Security

Code security and analysis

Who has access

PUBLIC REPOSITORY

This repository is public and visible to anyone.

Manage

DIRECT ACCESS

0 collaborators have access to this repository. Only you can contribute to this repository.

Manage access

You haven't invited any collaborators yet

Add people

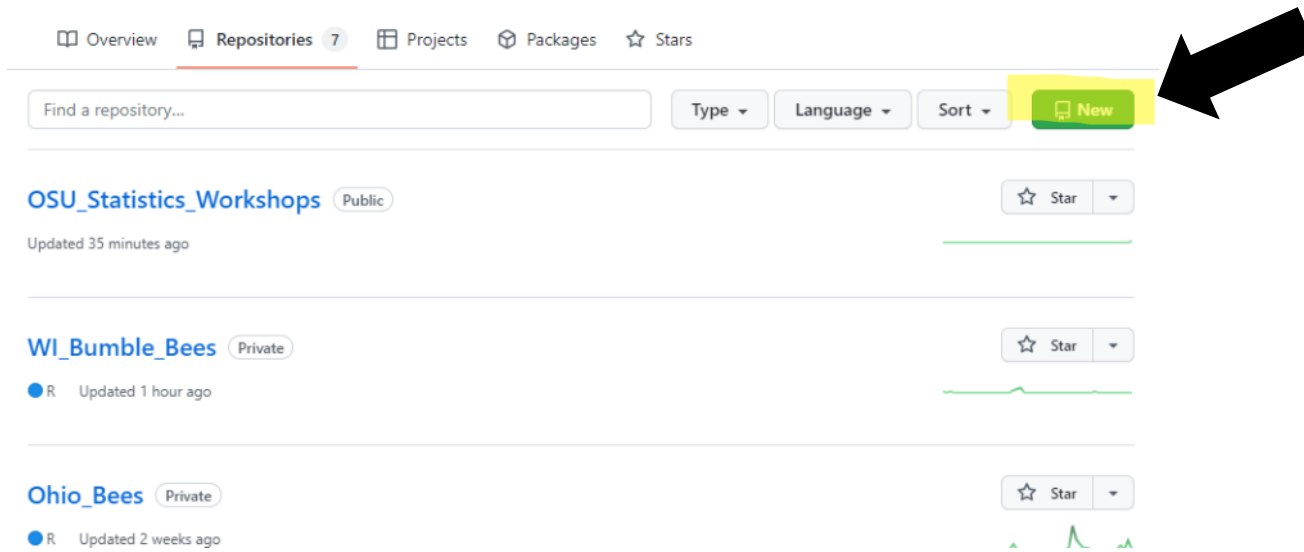
Add collaborators  
to your repositories  
in settings

**Create your own repository!**



# Create your own repository!

1. Log into your GitHub account, go to the Repositories tab, click New



## Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository.](#)

### Repository template

Start your repository with a template repository's contents.

No template ▾

Owner \*

kiperry ▾

Repository name \*

PNR\_Beetles ✓

Great repository names are short and memorable. Need inspiration? How about [crispy-train](#)?

Description (optional)

☒ Public



Anyone on the internet can see this repository. You choose who can commit.

☐ Private



You choose who can see and commit to this repository.

### Initialize this repository with:

Skip this step if you're importing an existing repository.

☒ Add a README file

This is where you can write a long description for your project. [Learn more.](#)

### Add .gitignore

Choose which files not to track from a list of templates. [Learn more.](#)

.gitignore template: None ▾

### Choose a license

A license tells others what they can and can't do with your code. [Learn more.](#)


License: None ▾

This will set `main` as the default branch. Change the default name in your [settings](#).

 You are creating a public repository in your personal account.

Create repository

# Edit your README file

 kiperry / PNR\_Beetles Public


[Code](#) [Issues](#) [Pull requests](#) [Actions](#) [Projects](#) [Wiki](#) [Security](#) [Insights](#) [Settings](#)

main


1 branch

0 tags

[Go to file](#) [Add file](#) [Code](#)


 kiperry Initial commit

csf2a4c 1 minute ago 1 commit

 README.md

Initial commit 1 minute ago

README.md



## PNR\_Beetles

### About

No description, website, or topics provided.

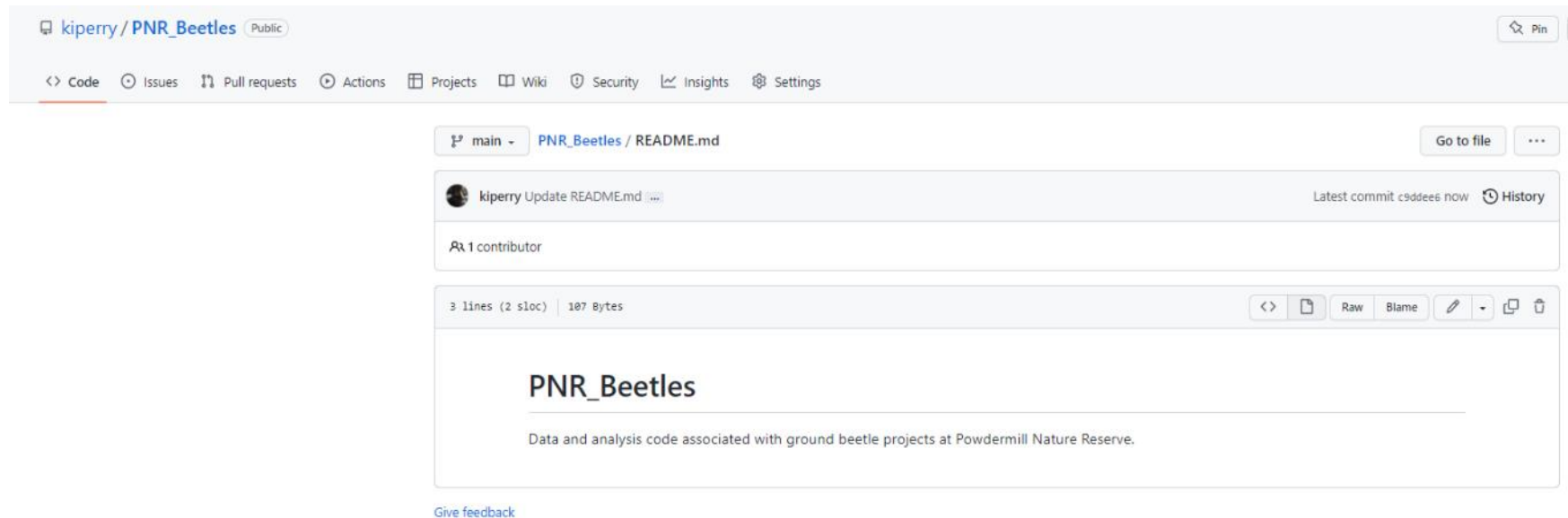
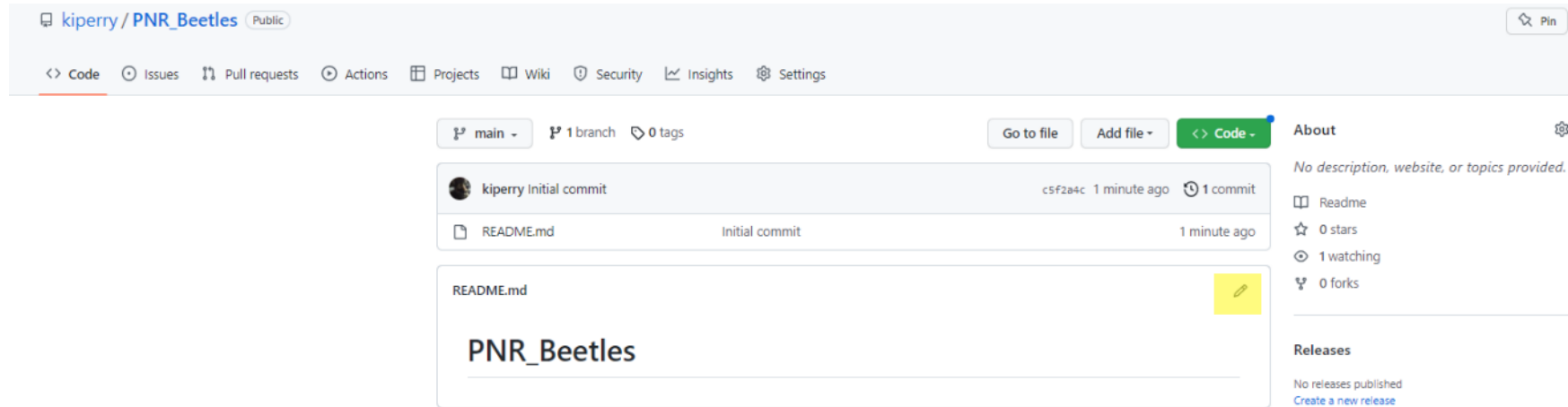
-  Readme
-  0 stars
-  1 watching
-  0 forks

### Releases

No releases published

[Create a new release](#)

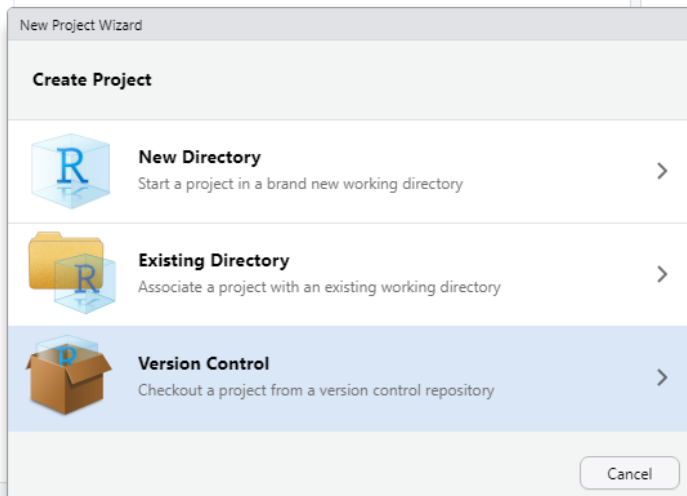
# Edit your README file



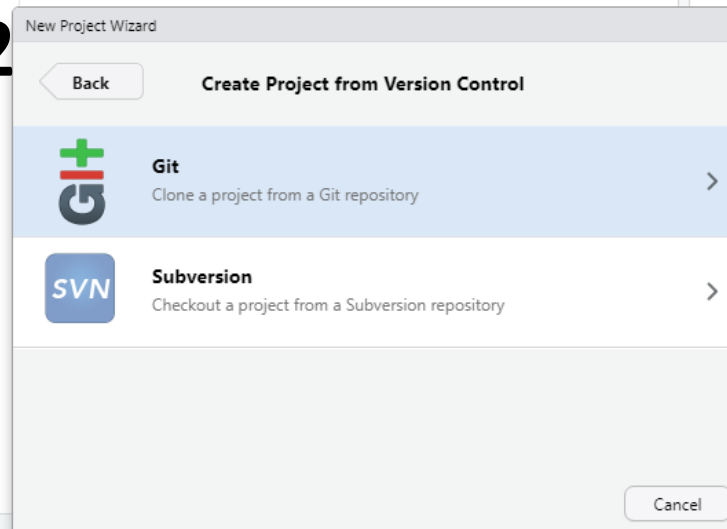
Update readme file  
with a commit

# Clone your newly created GitHub repository using R

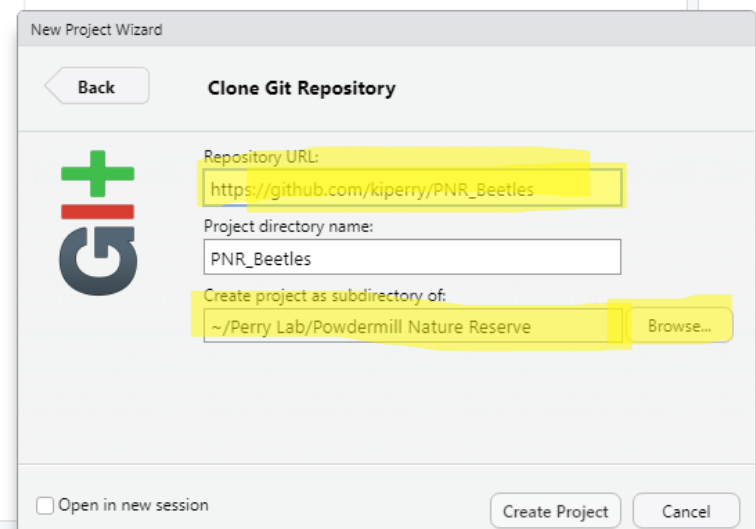
1



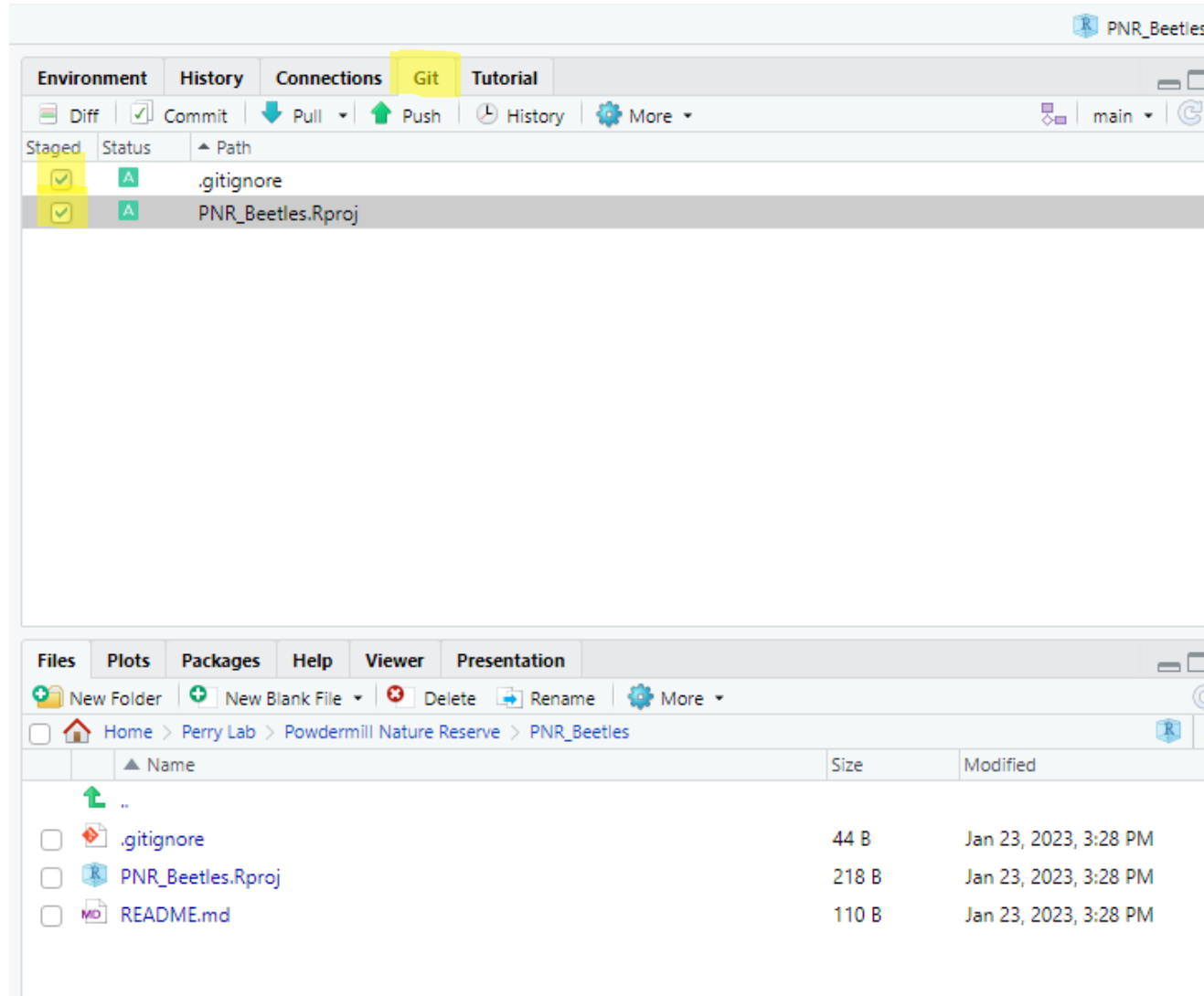
2



3



# Select Git tab and make a commit to save changes



# Select Git tab and make a commit to save changes

The screenshot shows the RStudio interface with the Git tab selected. A large black arrow points to the 'Git' tab in the top menu bar. The 'Git' tab is active, showing a list of staged files: `.gitignore` and `PNR_Beetles.Rproj`. The 'Commit' button is visible in the top toolbar. Below the file list, the 'Files' pane shows the project structure: `Home > Perry Lab > Powdermill Nature Reserve > PNR_Beetles`. The 'Review Changes' dialog is open, showing the same staged files. The 'Commit message' field contains the text 'added R project'. The 'Commit' button is highlighted in yellow. The dialog also shows the commit message character count (15 characters) and an 'Amend previous commit' checkbox. The bottom pane shows the diff of the staged files, with a green background indicating added content.

**RStudio: Review Changes**

Changes | History | main | ☒ Stage | Revert | Ignore

Staged | Status | Path

Staged	Status	Path
<input checked="" type="checkbox"/>	A	.gitignore
<input checked="" type="checkbox"/>	A	PNR_Beetles.Rproj

Commit message (15 characters):  
added R project

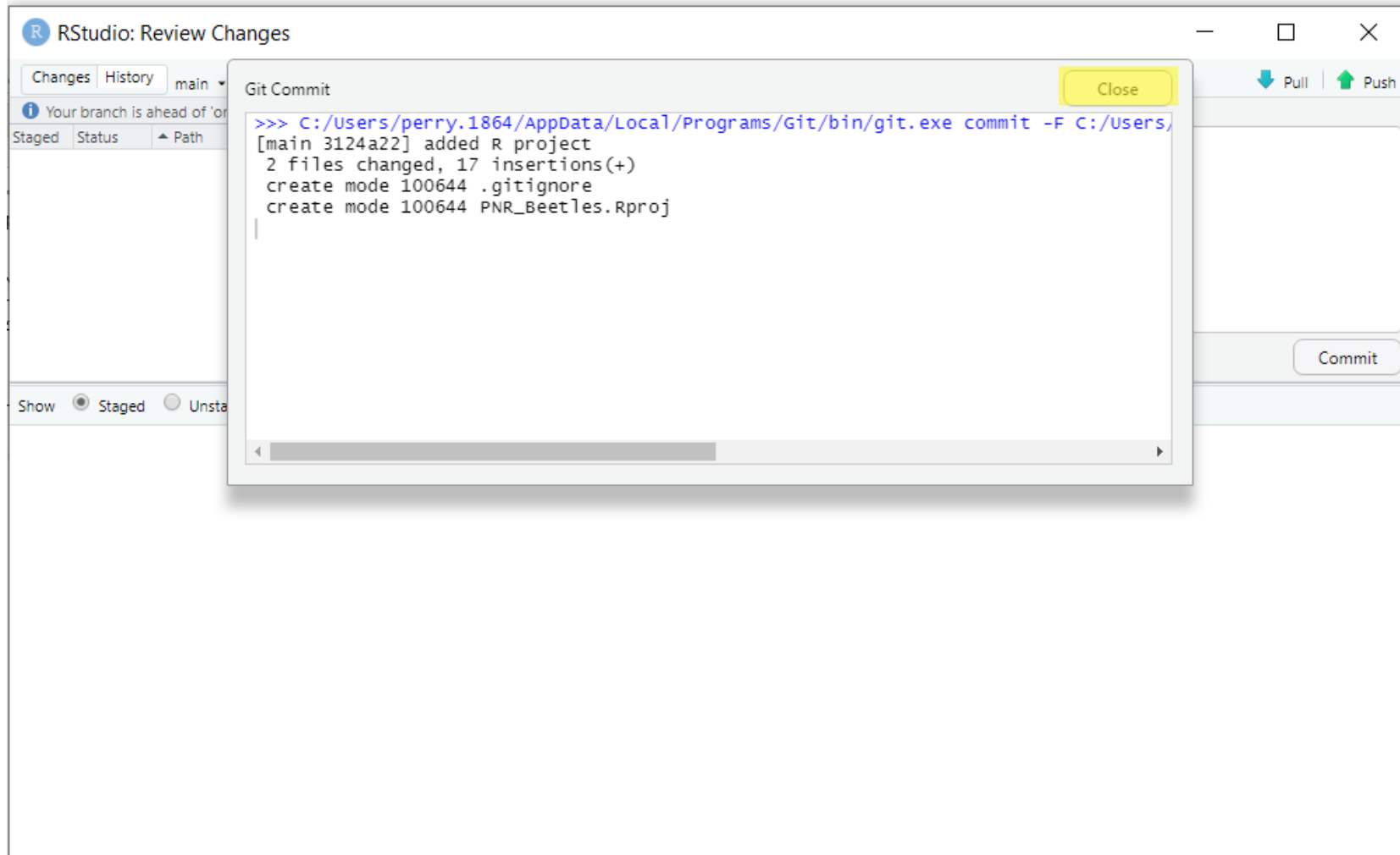
☐ Amend previous commit **Commit**

Show: ☒ Staged ☐ Unstaged Context: 5 lines ☐ Ignore Whitespace Unstage All

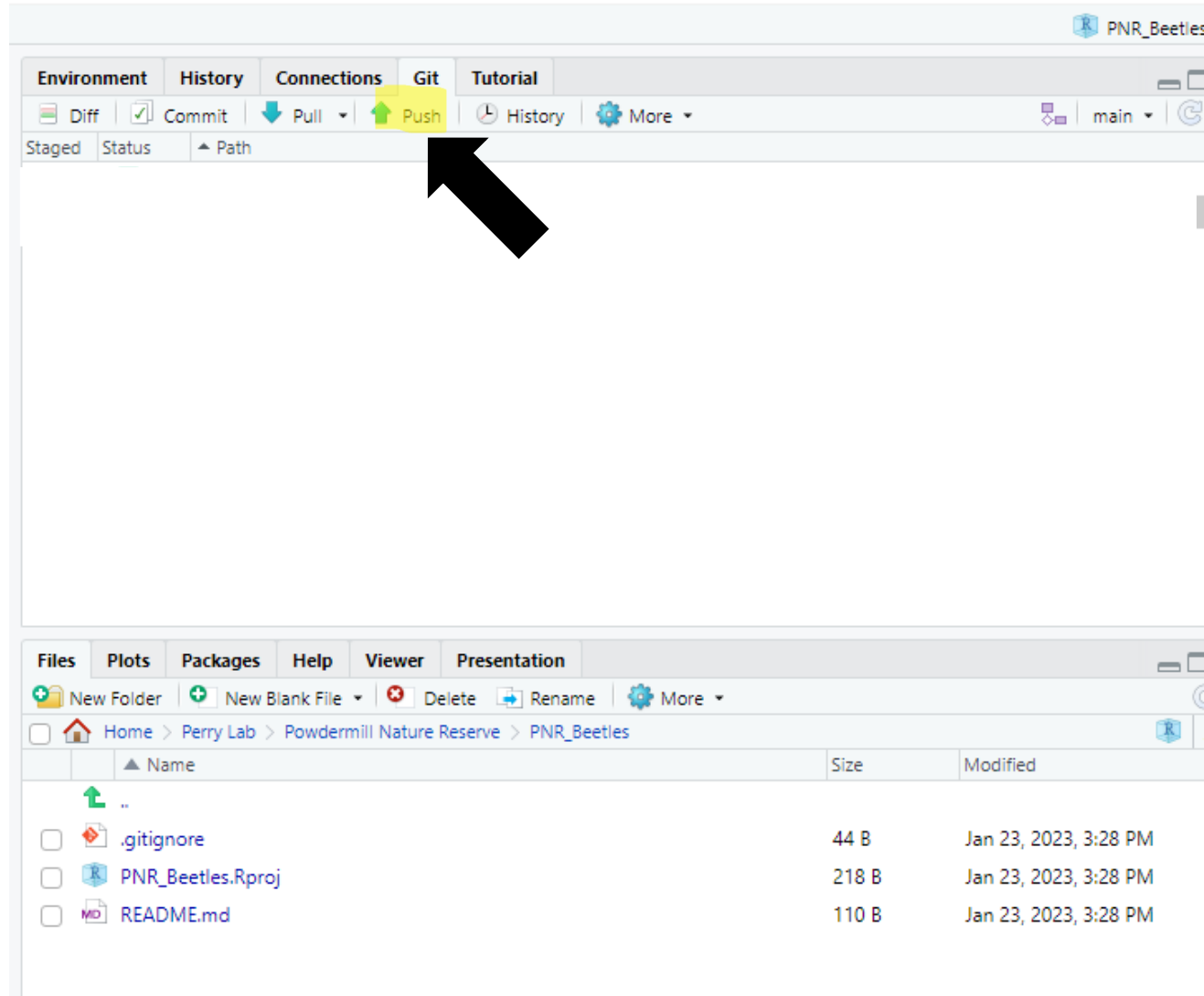
@@ -0,0 +1,13 @@

```
1 Version: 1.0
2
3 Restoreworkspace: Default
4 Saveworkspace: Default
5 AlwaysSaveHistory: Default
6
7 EnableCodeIndexing: Yes
8 UsespacesForTab: Yes
9 NumSpacesForTab: 2
10 Encoding: UTF-8
11
12 Rnwweave: Sweave
13 LaTeX: pdfLaTeX
```

# Select Git tab and make a commit to save changes



# Push changes to your repository on GitHub

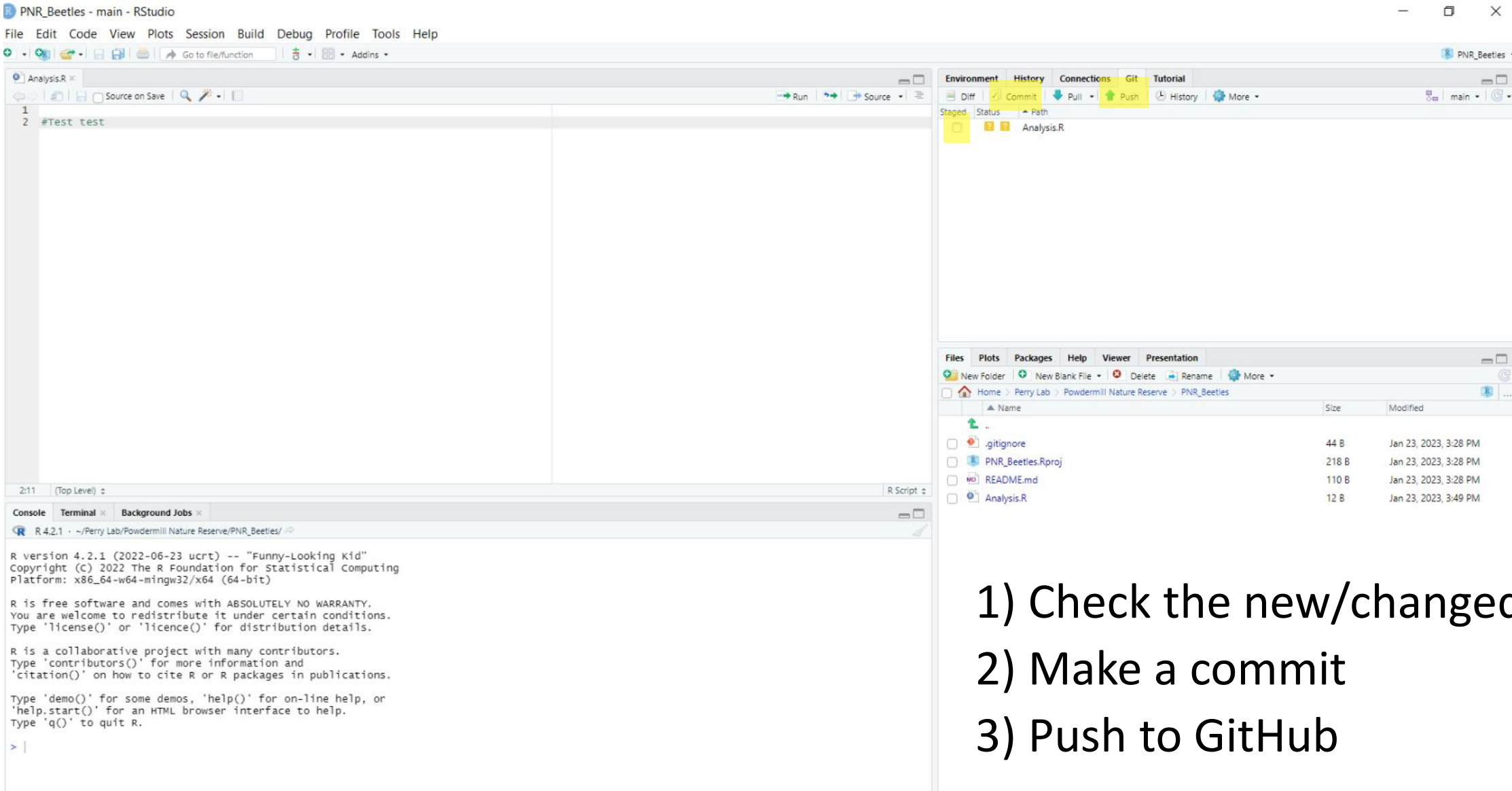




# Link your newly created GitHub repository with R



# Create a new r script and add to your repository



The screenshot displays the RStudio IDE interface for a project named "PNR\_Beetles". The main editor window shows a new R script file named "Analysis.R" with the following content:

```
1  
2 #Test test
```


The bottom-left pane shows the R console output, displaying the R version (4.2.1) and copyright information. The bottom-right pane shows the Files view, listing the project files:

Name	Size	Modified
..		
.gitignore	44 B	Jan 23, 2023, 3:28 PM
PNR_Beetles.Rproj	218 B	Jan 23, 2023, 3:28 PM
README.md	110 B	Jan 23, 2023, 3:28 PM
Analysis.R	12 B	Jan 23, 2023, 3:49 PM

The top-right pane shows the Git interface, highlighting the "Push" button, indicating the new file is being added to the repository.

- 1) Check the new/changed file
- 2) Make a commit
- 3) Push to GitHub

# New R files now in GitHub repository

 kiperry / **PNR\_Beetles** Public

[Code](#) [Issues](#) [Pull requests](#) [Actions](#) [Projects](#) [Wiki](#) [Security](#) [Insights](#) [Settings](#)

main ▾


1 branch





0 tags


Go to file

Add file ▾

[Code](#)

 kiperry added r script 2ce02bf now 4 commits

 .gitignore	added R project	9 minutes ago
 Analysis.R	added r script	now
 PNR_Beetles.Rproj	added R project	9 minutes ago
 README.md	Update README.md	32 minutes ago

README.md 

## PNR\_Beetles

---

Data and analysis code associated with ground beetle projects at Powdermill Nature Reserve.

# Review changes in your files over time

Version control that documents development history over time

The screenshot displays the RStudio interface with the 'Review Changes' window open. The window is divided into several sections:

- Commit History:** A table showing the last five commits, all by Kayla I Perry on 2023-01-23.
- Commit Details:** Information for the selected commit (SHA: 974b0cbf), including author, date, subject, and parent.
- File Differences:** A view of the 'Analysis.R' file showing changes between the parent and current commit.

Subject	Author	Date (UTC)	SHA
HEAD -> refs/heads/main origin/main origin/HEAD updated code	Kayla I Perry <kiperry1488@gmail.com>	2023-01-23	974b0cbf
added r script	Kayla I Perry <kiperry1488@gmail.com>	2023-01-23	2ce02bf9
added R project	Kayla I Perry <kiperry1488@gmail.com>	2023-01-23	3124a221
Update README.md	Kayla I Perry <kiperry1488@gmail.com>	2023-01-23	c9dde66
Initial commit	Kayla I Perry <kiperry1488@gmail.com>	2023-01-23	c5f2a4c6

SHA	974b0cbfee447179394fc7ca8a7143dd34623261
Author	Kayla I Perry <kiperry1488@gmail.com>
Date (UTC)	2023-01-23 20:55
Subject	updated code
Parent	2ce02bf96a3753219aaab7e31664b82ba783fd0b

File	Analysis.R
@@ -1,2 +1,4 @@	
1 1	
2 #Test test	No newline at end of file
2 #Test test	
3	
4 #another update	
No newline at end of file	

The right side of the image shows the RStudio interface with the 'Git' tab selected, displaying the commit history and file list.

# If a collaborator is added to your repository....

Start by pulling changes from the online repository

