



# Research Data Workshop Series

## - Introduction to GitHub

Lucas Alcantara, Ph.D.  
[lucas.ma@uoguelph.ca](mailto:lucas.ma@uoguelph.ca)



**AGRI-FOOD DATA  
CANADA**

AT THE UNIVERSITY *of* GUELPH

# Workshop Outline

- Welcome to Git and GitHub
- Git/GitHub (short) Glossary
- Practice
  - GitHub Skills
  - GitHub Desktop

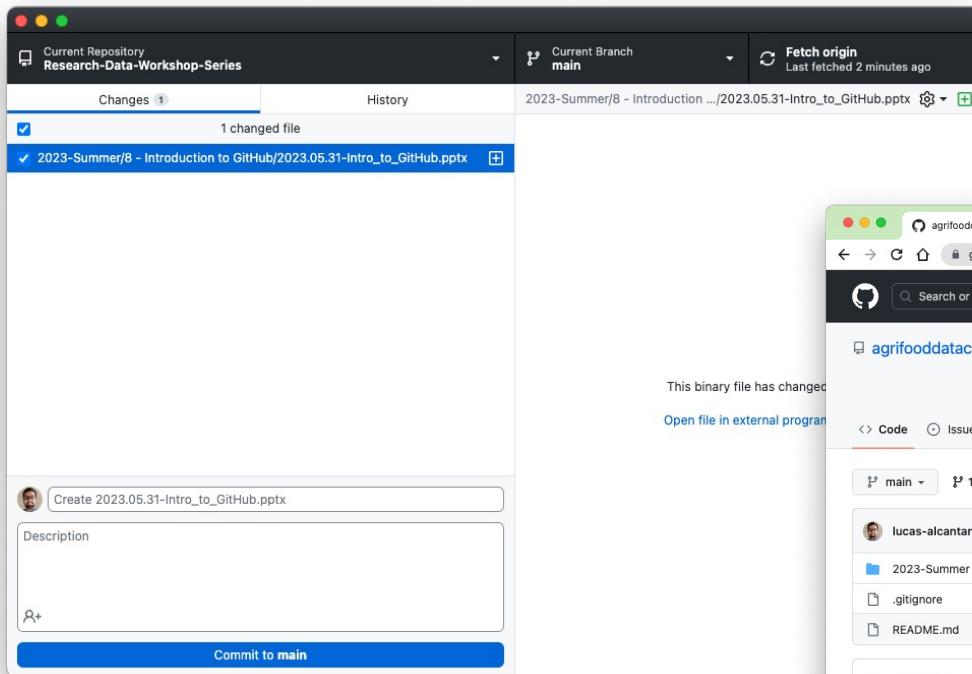
# Welcome to Git and GitHub

# What is Git/GitHub?

<https://youtu.be/w3jLJU7DT5E> - How GitHub works

# What is Git/GitHub?

- A Software!



The screenshot shows a GitHub repository page. The URL is "github.com/agrifooddatacanada/Research-Data-Workshop-Series". The repository is public and has 1 branch and 0 tags. It lists several commits by "lucas-alcantara":

- f6c5612 2 weeks ago move data folder to my\_app
- 2023-Summer move data folder to my\_app 2 weeks ago
- .gitignore Update .gitignore 2 months ago
- README.md Update README.md 2 weeks ago

A banner at the bottom of the repository page reads: "AGRI-FOOD RESEARCH DATA WORKSHOP SERIES Wednesday Workshops 9:00 - 12:00 p.m."

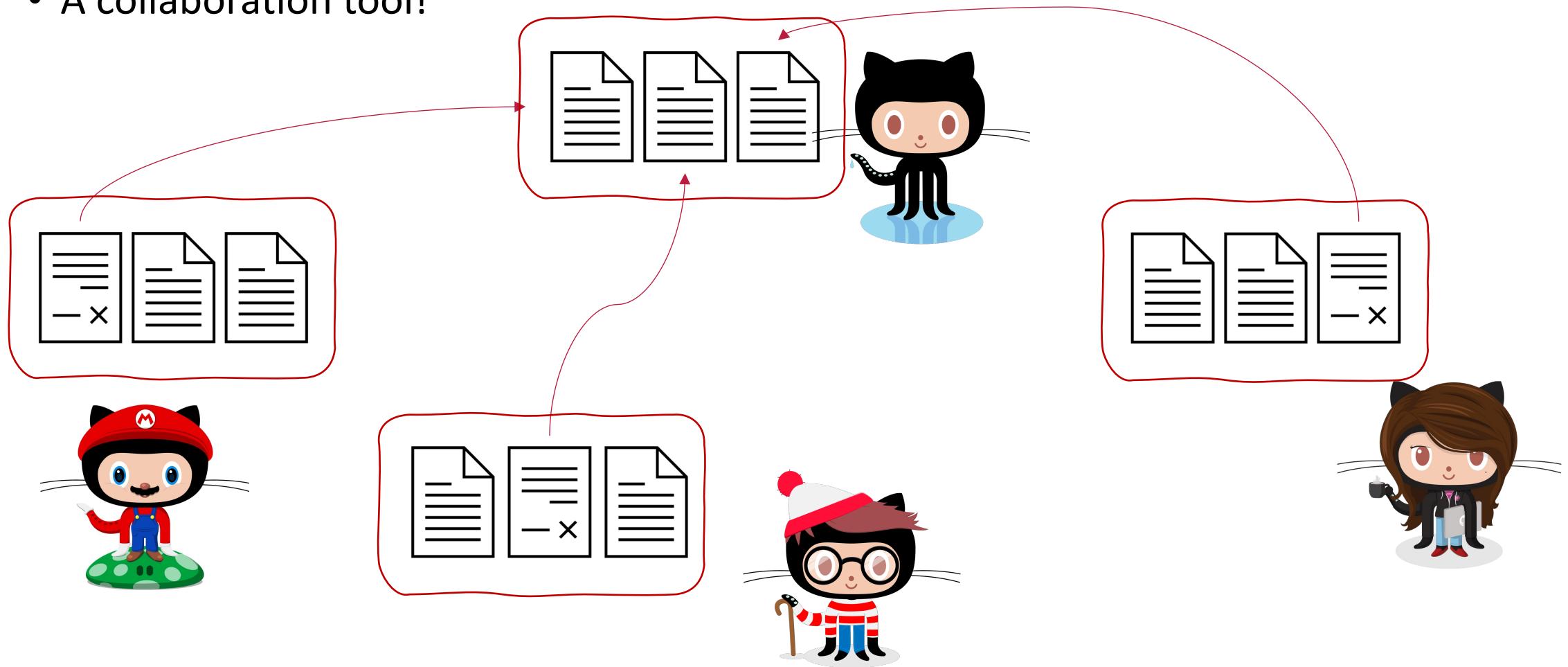
```
Research-Data-Workshop-Series -- zsh -- 80x14
~/GitHub/Research-Data-Workshop-Series -- zsh
Research-Data-Workshop-Series % git status
On branch main
Your branch is up to date with 'origin/main'.

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    2023-Summer/8 - Introduction to GitHub/2023.05.31-Intro_to_GitHub.pptx

nothing added to commit but untracked files present (use "git add" to track)
alcantala@OVPR-V2VNL0RX4N:~/GitHub/Research-Data-Workshop-Series %
```

# What is Git/GitHub?

- A collaboration tool!



# What is Git/GitHub?

- A collaboration tool!

github.com/RinteRface/bs4Dash/issues/297

RinteRface / bs4Dash Public

Issues 69 Pull requests 10 Actions Projects 1 Security Insights

**tabsetPanel renders below the list of tabPanels when vertical = TRUE #297**

**Closed** lucas-alcantara opened this issue on Jul 11, 2022 · 2 comments

lucas-alcantara commented on Jul 11, 2022

Hello,

I am trying to use the option `vertical= TRUE` within `tabsetPanel`, but even though I can get the vertical list of `tabPanel`, the contents are rendered below the list and not on the right side of it. I thought it could be because of a short width, but nothing changes even with `width = 12`.

Am I missing anything or is there an issue here?

Thanks!

```
library(shiny)
library(bs4Dash)

ui <- dashboardPage(
  header = dashboardHeader(
    title = dashboardBrand(
      title = "My dashboard"
    )
  ),
  sidebar = bs4DashSidebar(),
  controlbar = dashboardControlbar(),
  body = dashboardBody(
    fluidRow(
      column(
        12,
        box(
          width = 12
        )
      )
    )
  )
)
```

github.com/RinteRface/bs4Dash/issues/323

RinteRface / bs4Dash Public

Issues 69 Pull requests 10 Actions Projects 1 Security Insights

**Feature request: remove collapse animation on app startup #323**

**Closed** lucas-alcantara opened this issue on Dec 5, 2022 · 2 comments

lucas-alcantara commented on Dec 5, 2022

Hi David,

My app starts with a sign-in page with a collapsed sidebar, which is only supposed to show when users click on the 'sign in' button. Even though I enjoy the collapse animation at other times, on startup I find it rather distracting.

Request: Is it possible to start the app without animating the sidebar being collapsed at all?

Shiny version: 1.7.2  
bs4Dash version: 2.2.0.9000

Here's a reproducible example:

```
library(shiny)
library(bs4Dash)

shinyApp(
  ui = dashboardPage(
    dashboardHeader(),
    dashboardSidebar(
      id = "sidebar",
      collapsed = TRUE,
      minified = FALSE,
      sidebarMenu(
        id = "sidebarMenu",
        menuItem(
          text = "Home",
          tabName = "tab1"
        )
      )
    )
  ),
  body = dashboardBody()
)
```

# What is Git/GitHub?

- A collaboration tool!

A screenshot of a GitHub pull request page. The URL is [github.com/RinteRface/bs4Dash/pull/236](https://github.com/RinteRface/bs4Dash/pull/236). The title is "removed a comma #236". The status is "Merged" by DivadNojnarg on Jan 12, 2022. The pull request has 1 commit, 13 checks, and 1 file changed. The conversation shows a comment from Duque-de-Sealand: "the basic example from the bs4Dash.Rmd couldnt be run because there was an extra comma. I removed the extra comma." Below the conversation, a message from DivadNojnarg says "removed a comma ...". The pull request details show no reviews, no assignees, and no labels. It also lists projects, milestones, and development information.

A screenshot of a GitHub pull request page. The URL is [github.com/RinteRface/bs4Dash/pull/209](https://github.com/RinteRface/bs4Dash/pull/209). The title is "Update card fixes #209". The status is "Merged" by DivadNojnarg on May 17, 2021. The pull request has 4 commits, 13 checks, and 85 files changed. The conversation shows a comment from DivadNojnarg: "Various improvements to updateCard". Below the conversation, a message from DivadNojnarg says "DivadNojnarg added 4 commits 2 years ago". The pull request details show no reviews, no assignees, and no labels. It also lists projects, milestones, and development information.

# What is Git/GitHub?

- An ecosystem of version-controlled repositories/projects!

This screenshot shows a GitHub repository page for 'agrifooddatacanada / Research-Data-Workshop-Series'. The repository is public and contains several commits from a user named 'lucas-alcantara'. The commits include moving data folders and updating README files. A preview of the 'README.md' file is shown, featuring a logo for 'AGRI-FOOD RESEARCH DATA WORKSHOP SERIES'.

Commits:

- move data folder to my\_app (2 weeks ago)
- Update .gitignore (2 months ago)
- Update README.md (2 weeks ago)

README.md preview:

AGRI-FOOD RESEARCH  
DATA WORKSHOP SERIES

This screenshot shows a detailed view of commits in the same GitHub repository. It highlights a series of commits made on May 31, 2023, by the user 'lucas-alcantara'. The commits involve moving data folders, updating README files, creating R scripts, and publishing PDF documents related to the AgriFood Data Workshop.

Commits on May 31, 2023:

- move data folder to my\_app (f6c5612)
- Update README.md (eb5b4e6)
- Create app.R (85fda0b)
- Update AgriFoodDataWorkshop\_20230531.pdf (3973959)
- Create AgriFoodDataWorkshop\_20230531.pdf (fd4hb81)

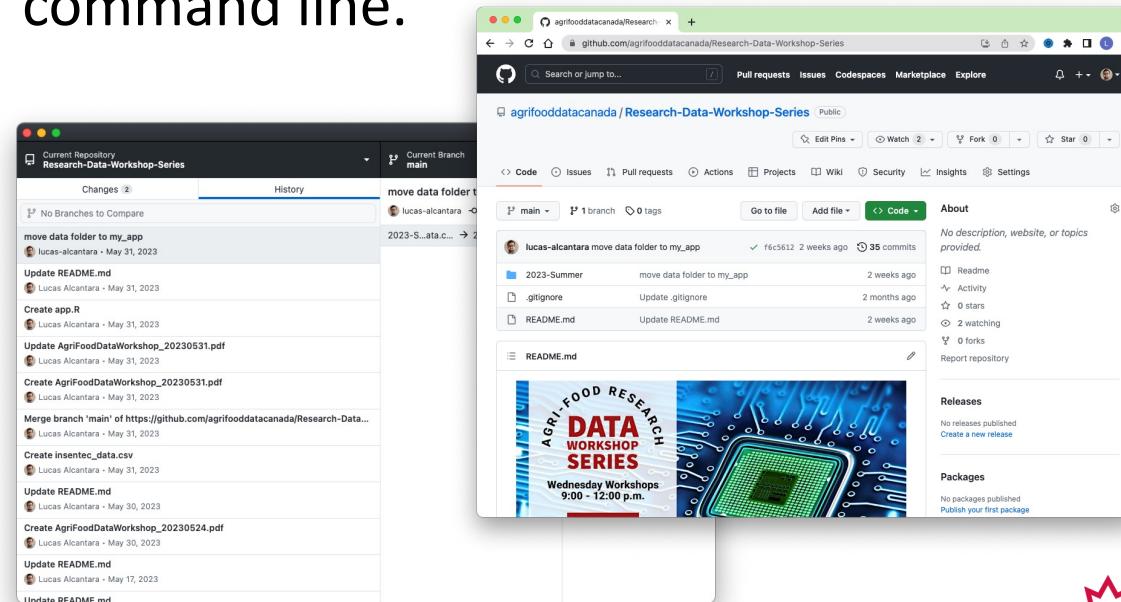
# Git vs. GitHub

- Git is the command line software that handles version control on your repository
- When you use GitHub, Git is always doing the work behind the scenes

```
Research-Data-Workshop-Series — zsh — 80x14
~/GitHub/Research-Data-Workshop-Series — zsh
Research-Data-Workshop-Series % git status
On branch main
Your branch is up to date with 'origin/main'.

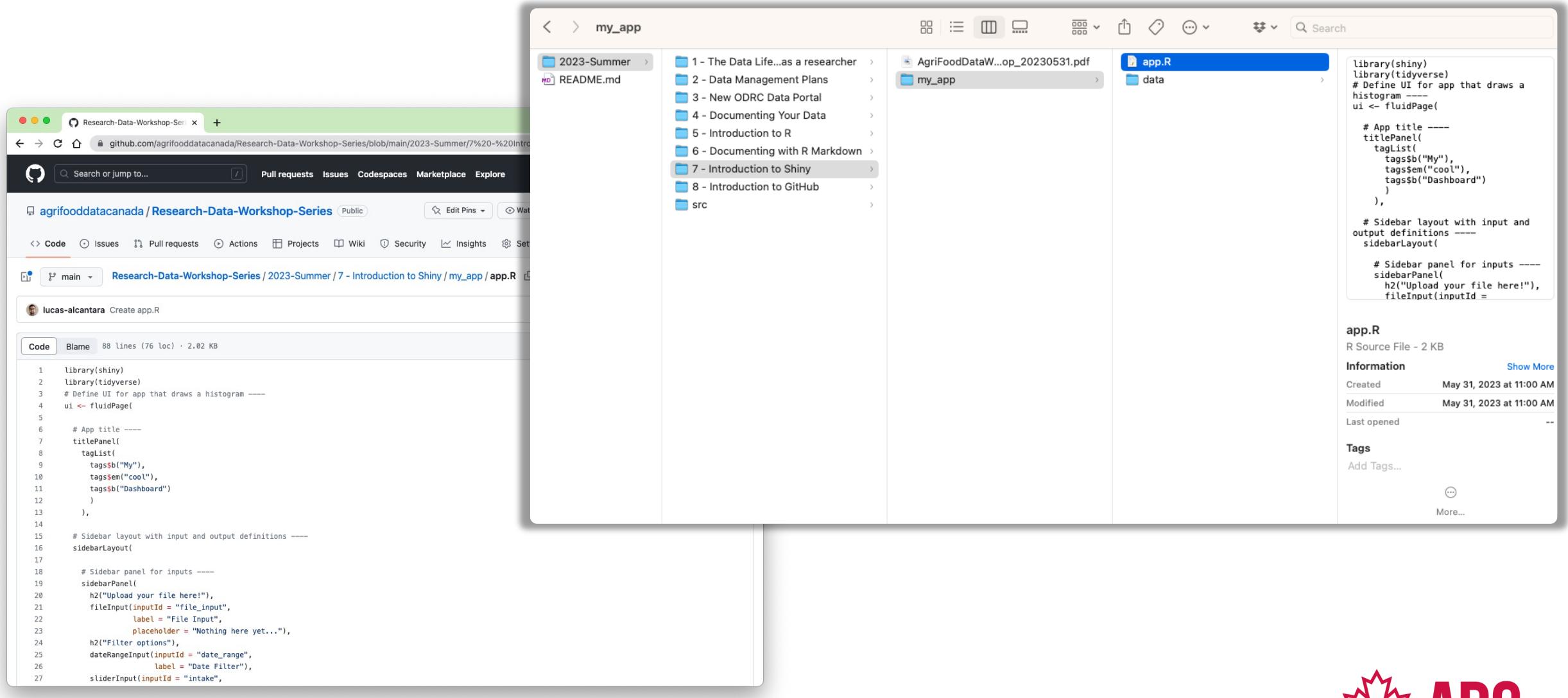
Untracked files:
  (use "git add <file>" to include in what will be committed)
    2023-Summer/8 - Introduction to GitHub/
nothing added to commit but untracked files present (use "git add" to track)
alcantara@0VPR-V2NL0RX4N Research-Data-Workshop-Series %
```

- GitHub is a service that hosts your repository online and helps you work with contributors/collaborators
- It's a web interface for version control
- Most often you will interface with GitHub (online) through the GitHub Desktop App or via the command line.



# **Git/GitHub (short) Glossary**

# Repository (Repo): This is where all your files/folders live

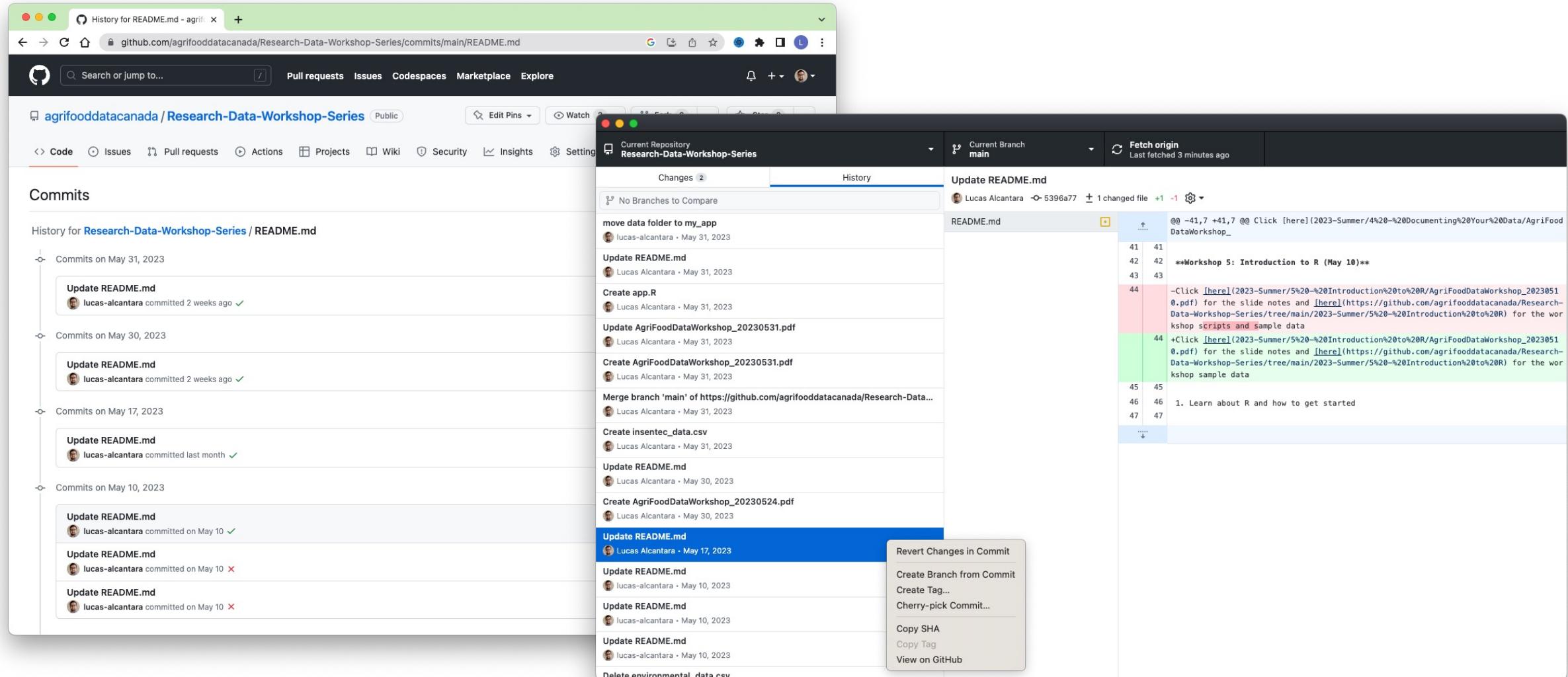


The image shows a dual-pane view of a GitHub repository. On the left, a browser window displays the GitHub interface for the repository `agrifooddatacanada/Research-Data-Workshop-Series`. The main pane shows the file structure of the `my_app` directory, which contains `2023-Summer`, `README.md`, `AgriFoodDataW...op_20230531.pdf`, and `app.R`. The right pane is a code editor showing the contents of `app.R`.

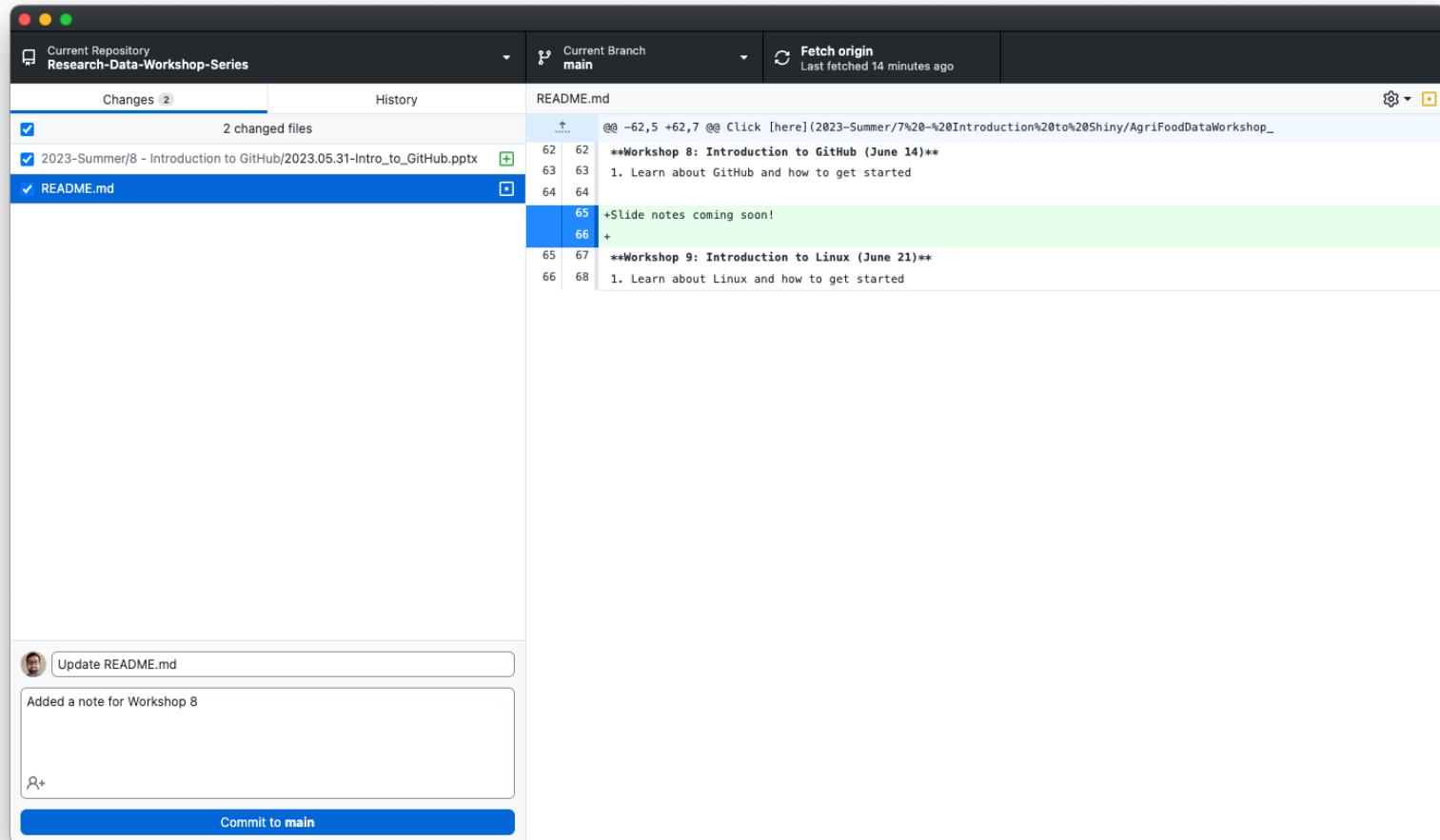
```
library(shiny)
library(tidyverse)
# Define UI for app that draws a histogram ----
ui <- fluidPage(
  # App title ----
  titlePanel(
    tagList(
      tags$b("My"),
      tags$em("cool!"),
      tags$b("Dashboard")
    )
  ),
  # Sidebar layout with input and output definitions ----
  sidebarLayout(
    # Sidebar panel for inputs ----
    sidebarPanel(
      h2("Upload your file here!"),
      fileInput(inputId = "file_input",
                label = "File Input",
                placeholder = "Nothing here yet..."),
      h2("Filter options"),
      dateRangeInput(inputId = "date_range",
                    label = "Date Filter"),
      sliderInput(inputId = "intake",

```

# Version Control: A system for tracking changes (versions) – Time Machine!



# Commit: A “Save” of a file version

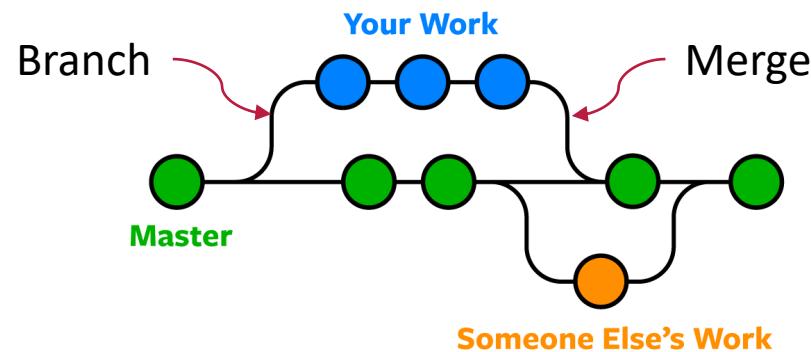


# Branch / Merge: A working copy

A copy of your project (repo) at a particular point in time

Allows you to experiment with new features without affecting the working parts of your project.

You can “merge” them into your project later if/when those new features are satisfactory.



<https://www.nobledesktop.com/image/gitresources/git-branches-merge.png>

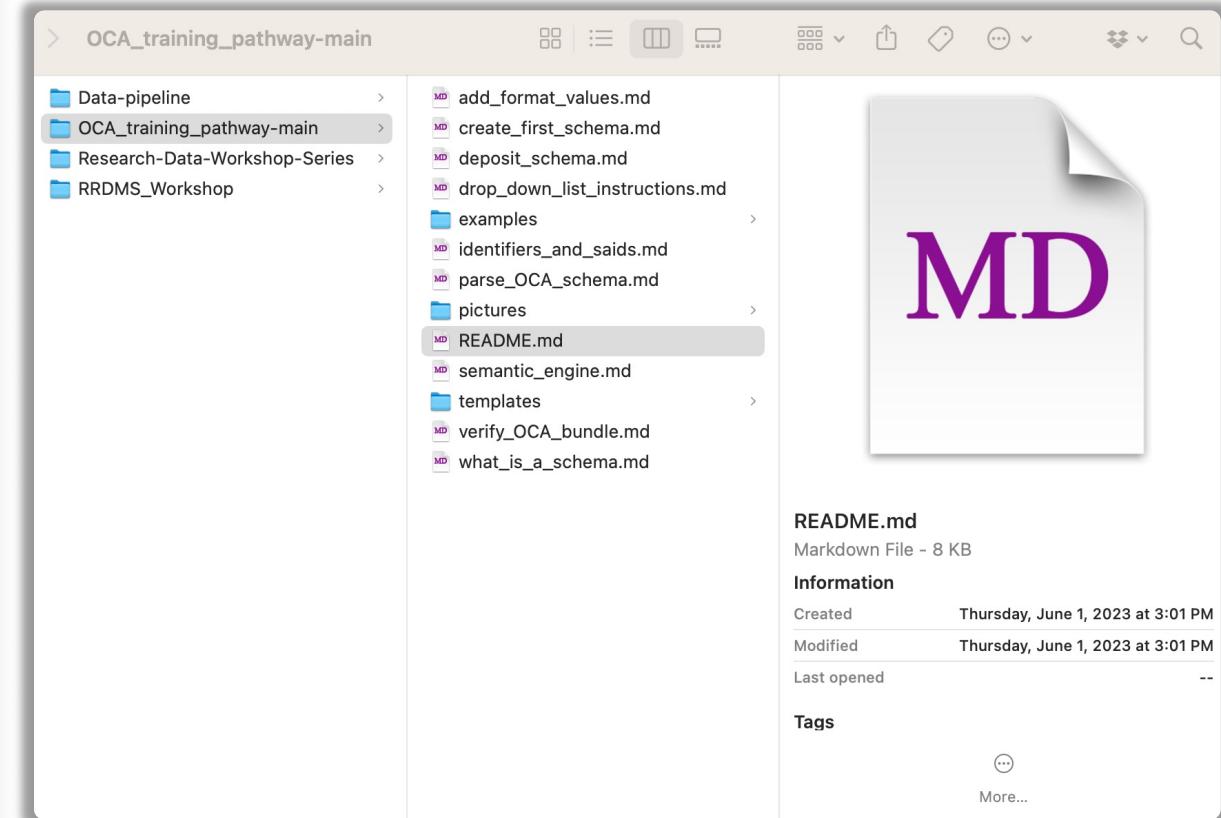
The screenshot shows a GitHub repository page for 'agrifooddatacanada/Research-Data-Workshop-Series'. The repository is public and has 2 branches and 0 tags. The main branch is the default. The staging branch contains a commit to move a data folder to 'my\_app'. The README.md file has been updated. The repository has 35 commits, 2 weeks ago, and 2 months ago. There are 2 watching and 0 forks. The repository is described as having no description, website, or topics provided. It includes sections for Readme, Activity, Stars, Watching, Forks, and Report repository. There are no releases published, and a link to Create a new release is provided. The Packages section shows no packages published, with a link to Publish your first package. The Contributors section lists 2 contributors: lucas-alcantara and carlyh-micb.

# Fork: A copy from a branch on GitHub

The image consists of two side-by-side screenshots of a GitHub repository page. The left screenshot shows the main repository page for 'agrifooddatacanada/OCA\_training\_pathway'. At the top, there is a 'Fork' button with a dropdown menu showing '4' existing forks. A red box highlights this button. Below the header, there is a list of files and commits. The right screenshot shows the forked repository 'lucas-alcantara/OCA\_training\_pathway'. At the top, it says 'forked from agrifooddatacanada/OCA\_training\_pathway'. A red box highlights this text. Both screenshots show a similar layout with tabs for Code, Issues, Pull requests, Actions, Projects, Wiki, Security, Insights, and Settings.

# Clone: A copy from a branch on your local machine

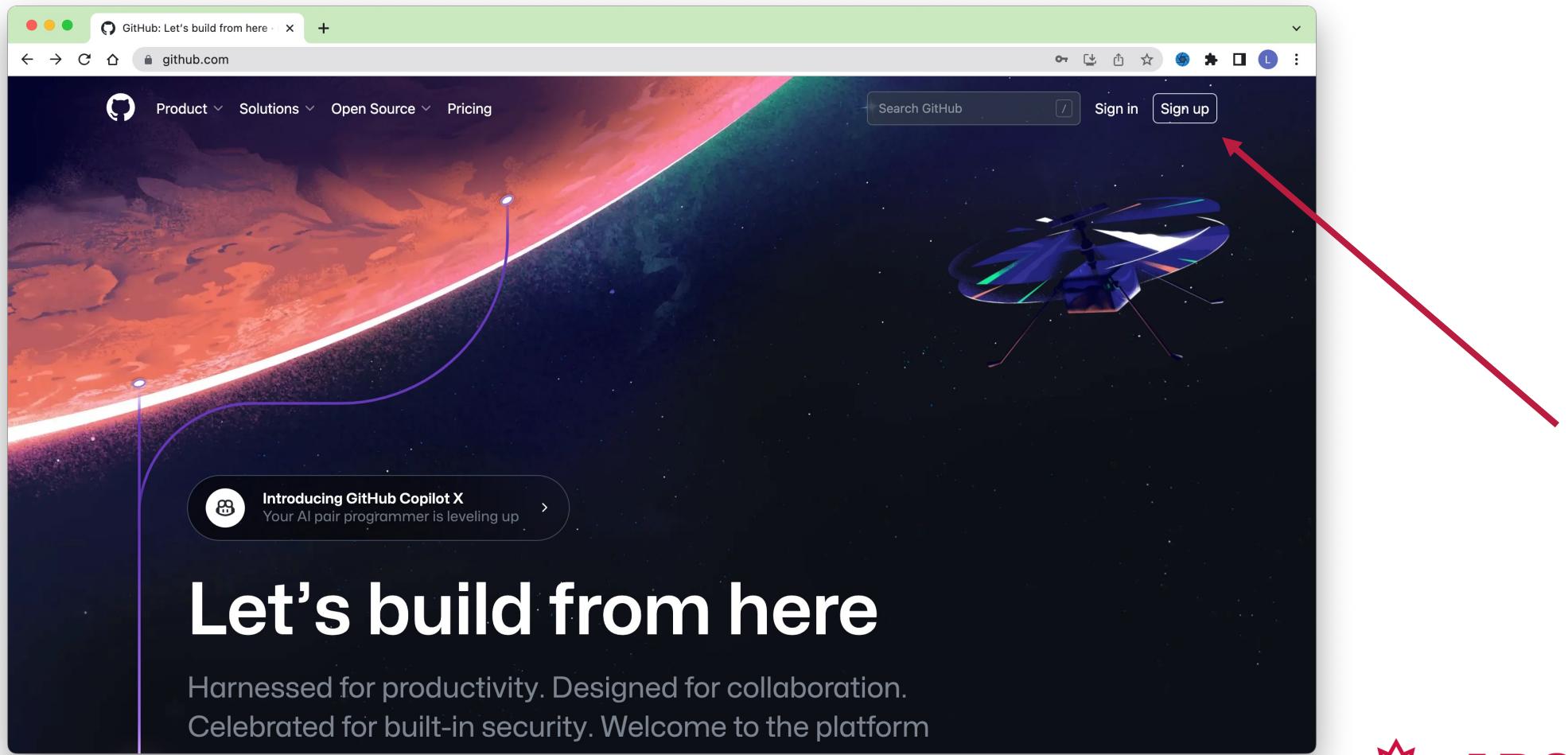
The screenshot shows a GitHub repository page for 'agrifooddatacanada/OCA\_training\_pathway'. The 'Code' dropdown menu is open, and the 'Clone' option is highlighted with a red box. The 'Clone' section includes options for HTTPS, SSH, and GitHub CLI, along with a URL: [https://github.com/agrifooddatacanada/OCA\\_training\\_pathway](https://github.com/agrifooddatacanada/OCA_training_pathway). Below this, there are links to 'Open with GitHub Desktop' and 'Download ZIP'.



**Let's have some  
practice!**

# Sign up for a free account on GitHub

<https://github.com>



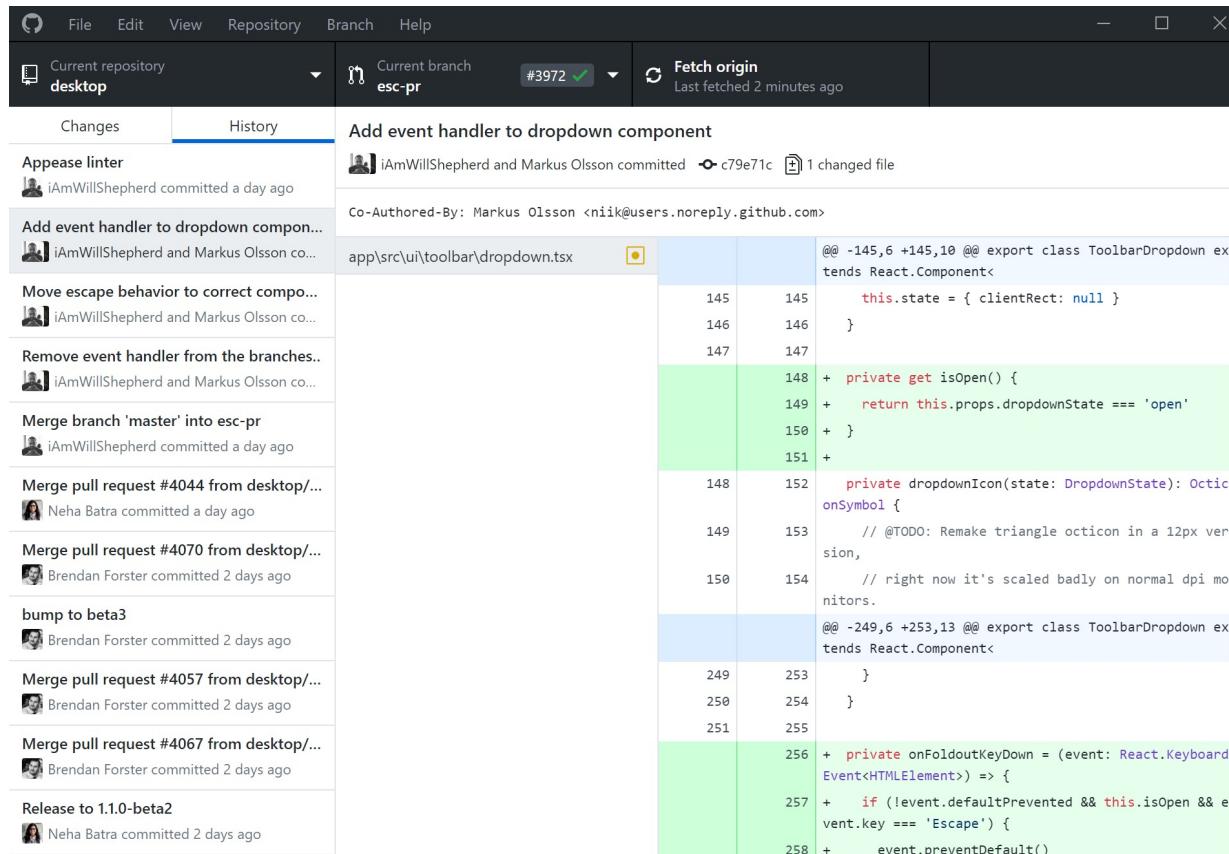
# GitHub Skills

<https://skills.github.com/>

The screenshot shows the GitHub Skills website at <https://skills.github.com/>. The page features a green header bar with the GitHub logo and the word "Skills". Below the header, there's a large image of the GitHub cat with various colored icons (plus signs, minus signs, etc.) floating around it. The main content area has a white background. At the top left, there's a section titled "GitHub Skills" with a subtext: "Learn how to use GitHub with interactive courses designed for beginners and experts." A green button labeled "Start with *Introduction to GitHub*" is visible. To the right of this, there's a section titled "Our courses" with a heading "First day on GitHub". Under this heading, three course cards are listed: "Introduction to GitHub" (Get started using GitHub in less than an hour.), "Communicate using Markdown" (Organize ideas and collaborate using Markdown, a lightweight language for text formatting.), and "GitHub Pages" (Create a site or blog from your GitHub repositories with GitHub Pages.). A red arrow points from the bottom left towards the "Introduction to GitHub" button.

# GitHub Desktop

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



This screenshot shows the GitHub Desktop application running on Windows. The interface includes a top navigation bar with File, Edit, View, Repository, Branch, and Help. Below the navigation is a header with "Current repository desktop" and "Current branch esc-pr #3972". A "Fetch origin" button indicates the last fetch was 2 minutes ago. The main area displays a pull request titled "Add event handler to dropdown component". The commit message is "Appease linter" by iAmWillShepherd and Markus Olsson committed a day ago. The commit details show a co-authored commit from Markus Olsson. The code diff shows changes in the file app/src/ui/toolbar/dropdown.tsx, specifically adding a private isOpen() method and handling keyboard events for foldout behavior.

```
@@ -145,6 +145,10 @@ export class ToolbarDropdown extends React.Component<
    this.state = { clientRect: null }
  }

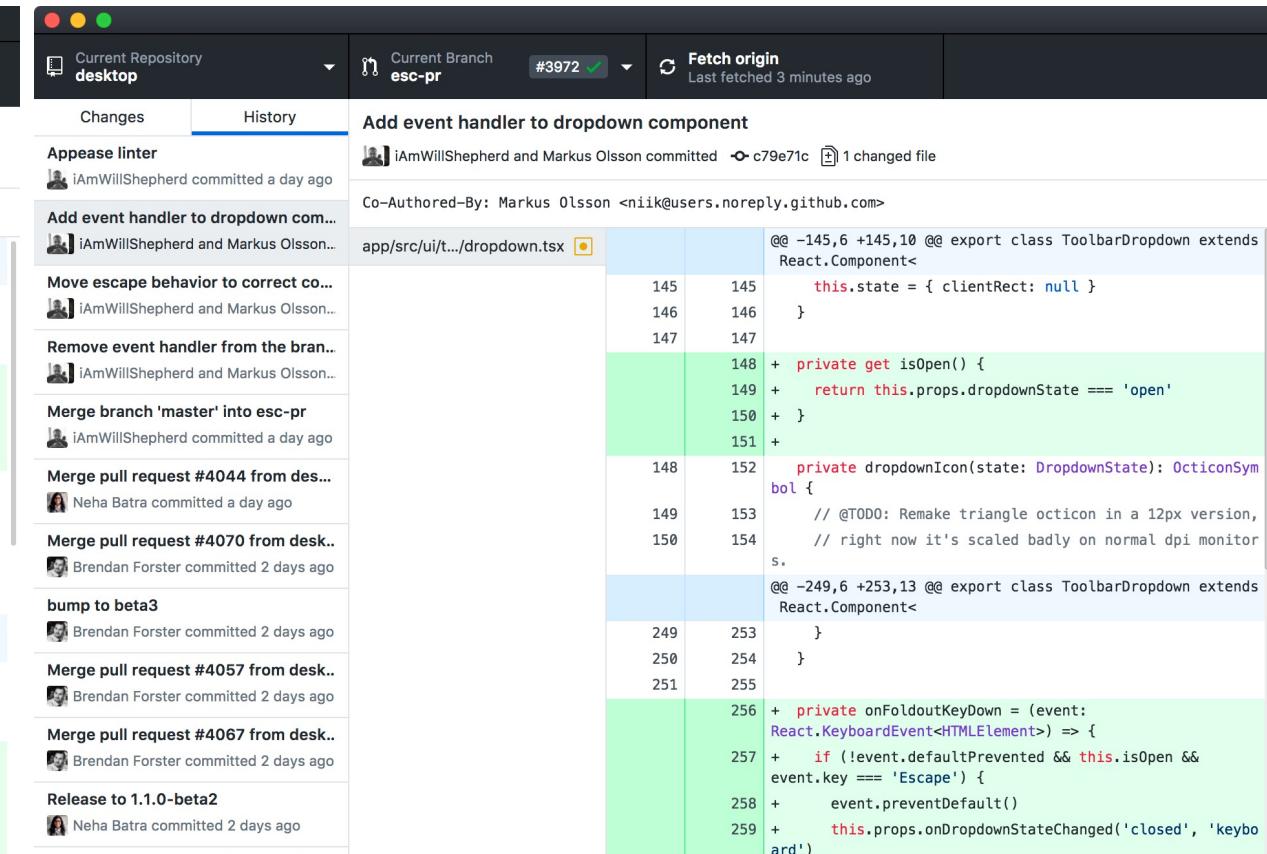
  + private get isOpen() {
  +   return this.props.dropdownState === 'open'
  + }

  private dropdownIcon(state: DropdownState): OcticonSymbol {
    // @TODO: Remake triangle octicon in a 12px version,
    // right now it's scaled badly on normal dpi monitors.
  }

  @@ -249,6 +253,13 @@ export class ToolbarDropdown extends React.Component<
  }

  + private onFoldoutKeyDown = (event: React.KeyboardEvent<HTMLElement>) => {
  +   if (!event.defaultPrevented && this.isOpen && event.key === 'Escape') {
  +     event.preventDefault()
  +   }
  + }
```

Windows



This screenshot shows the GitHub Desktop application running on macOS. The interface is similar to the Windows version, with a top navigation bar and a header showing "Current repository desktop" and "Current branch esc-pr #3972". The pull request "Add event handler to dropdown component" is displayed, along with its commit history and code diff. The commit "Appease linter" by iAmWillShepherd and Markus Olsson is shown, along with a co-authored commit from Markus Olsson. The code diff in the file app/src/ui/toolbar/dropdown.tsx highlights the addition of the isOpen() method and the onFoldoutKeyDown event handler.

```
@@ -145,6 +145,10 @@ export class ToolbarDropdown extends React.Component<
    this.state = { clientRect: null }
  }

  + private get isOpen() {
  +   return this.props.dropdownState === 'open'
  + }

  private dropdownIcon(state: DropdownState): OcticonSymbol {
    // @TODO: Remake triangle octicon in a 12px version,
    // right now it's scaled badly on normal dpi monitors.
  }

  @@ -249,6 +253,13 @@ export class ToolbarDropdown extends React.Component<
  }

  + private onFoldoutKeyDown = (event: React.KeyboardEvent<HTMLElement>) => {
  +   if (!event.defaultPrevented && this.isOpen && event.key === 'Escape') {
  +     event.preventDefault()
  +   }
  + }
```

MacOS

# THANK YOU!

**Questions?**

Feel free to reach me later at  
[lucas.ma@uoguelph.ca](mailto:lucas.ma@uoguelph.ca)



**AGRI-FOOD DATA  
CANADA**

AT THE UNIVERSITY *of* GUELPH