

Research Data Workshop Series - Introduction to GitHub

Lucas Alcantara, Ph.D.
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

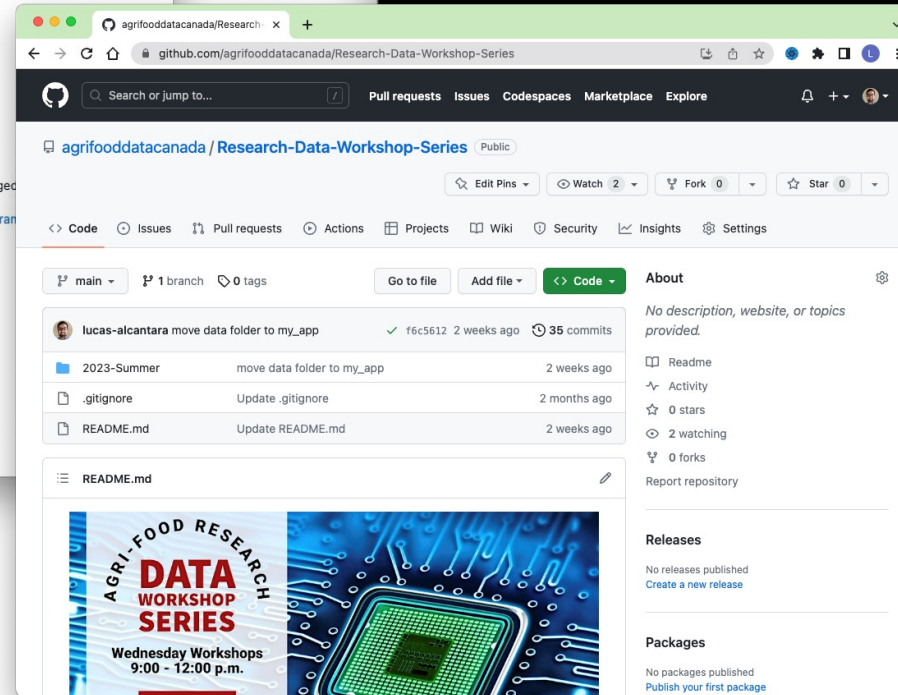
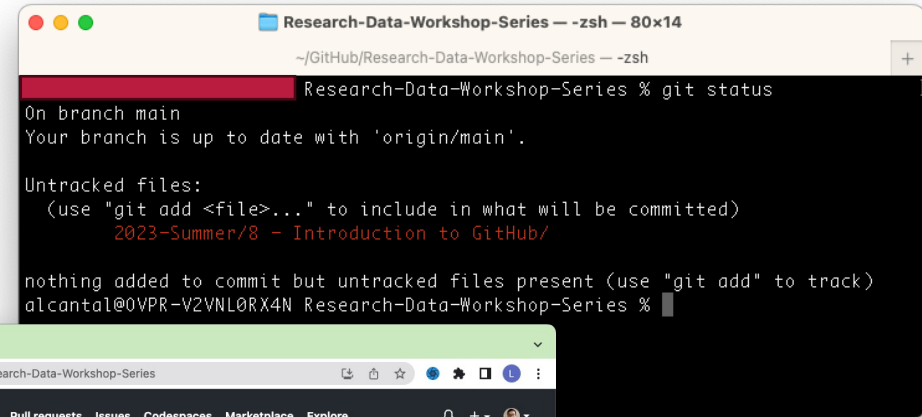
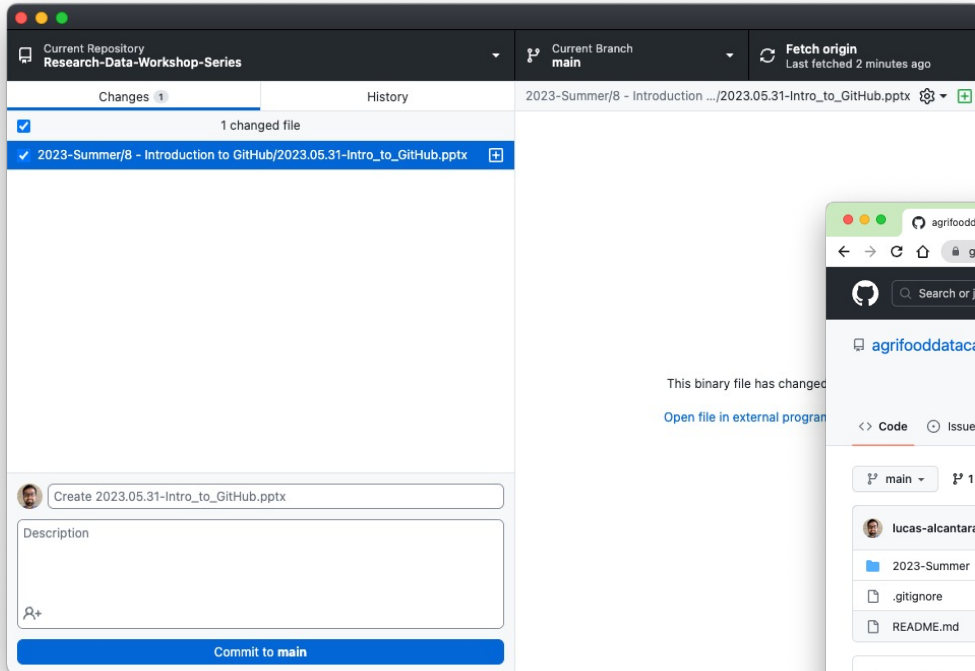
Welcome to Git and GitHub

What is Git/GitHub?

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

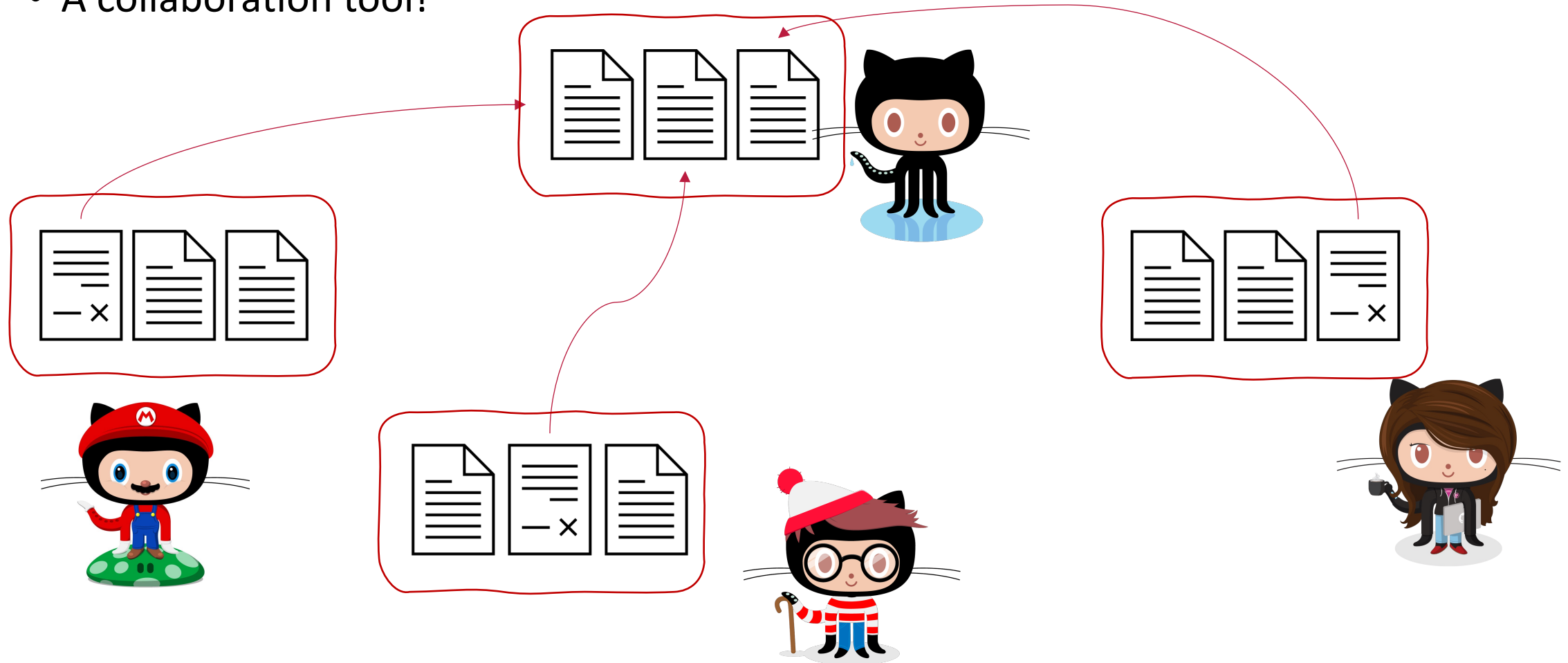
What is Git/GitHub?

- A Software!



What is Git/GitHub?

- A collaboration tool!



What is Git/GitHub?

- A collaboration tool!

The screenshot shows a GitHub issue page for the repository 'Rinteface / bs4Dash'. The issue title is 'tabsetPanel renders below the list of tabPanels when vertical = TRUE #297'. It is marked as 'Closed' and was opened by 'lucas-alcantara' on Jul 11, 2022. The issue has 2 comments. The main comment from 'lucas-alcantara' is dated Jul 11, 2022, and contains the following text: '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!'. Below the text is a code block with R code:

```
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
```

The screenshot shows a GitHub issue page for the repository 'Rinteface / bs4Dash'. The issue title is 'Feature request: remove collapse animation on app startup #323'. It is marked as 'Closed' and was opened by 'lucas-alcantara' on Dec 5, 2022. The issue has 2 comments. The main comment from 'lucas-alcantara' is dated Dec 5, 2022, and contains the following text: '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:'. Below the text is a code block with R code:

```
library(shiny)
library(bs4Dash)

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

What is Git/GitHub?

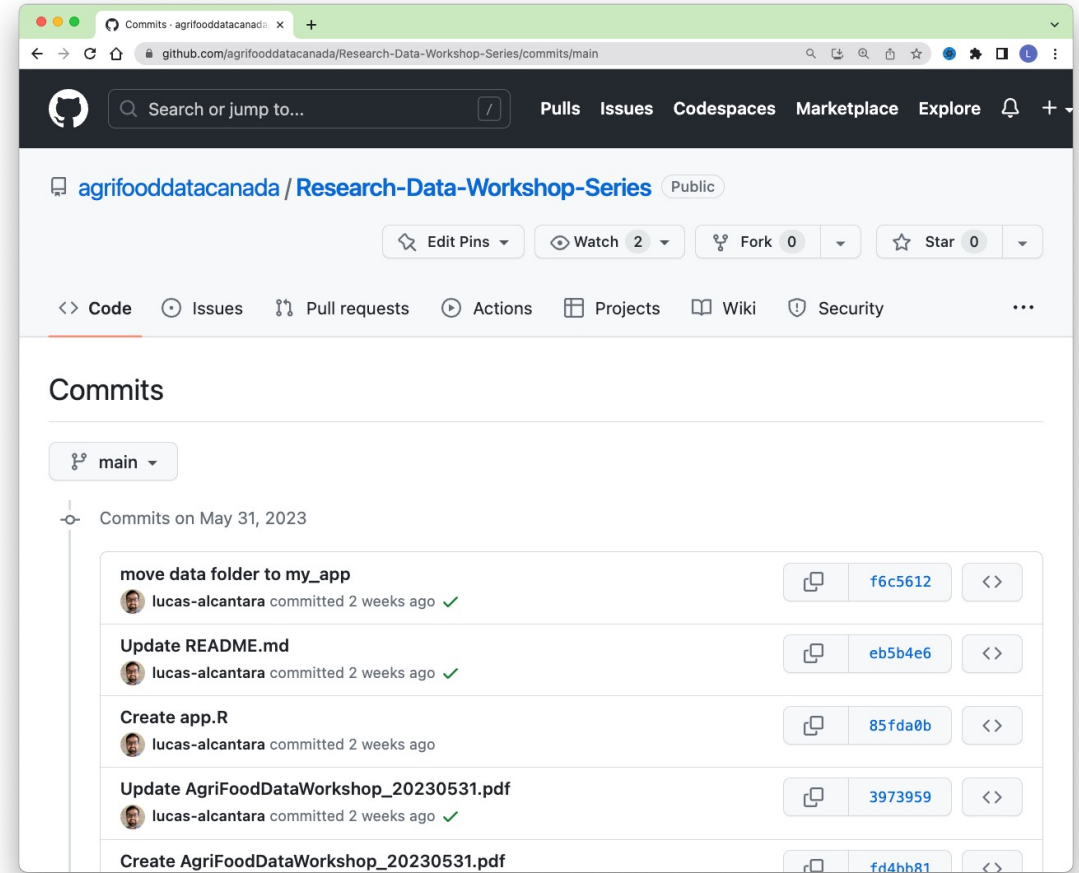
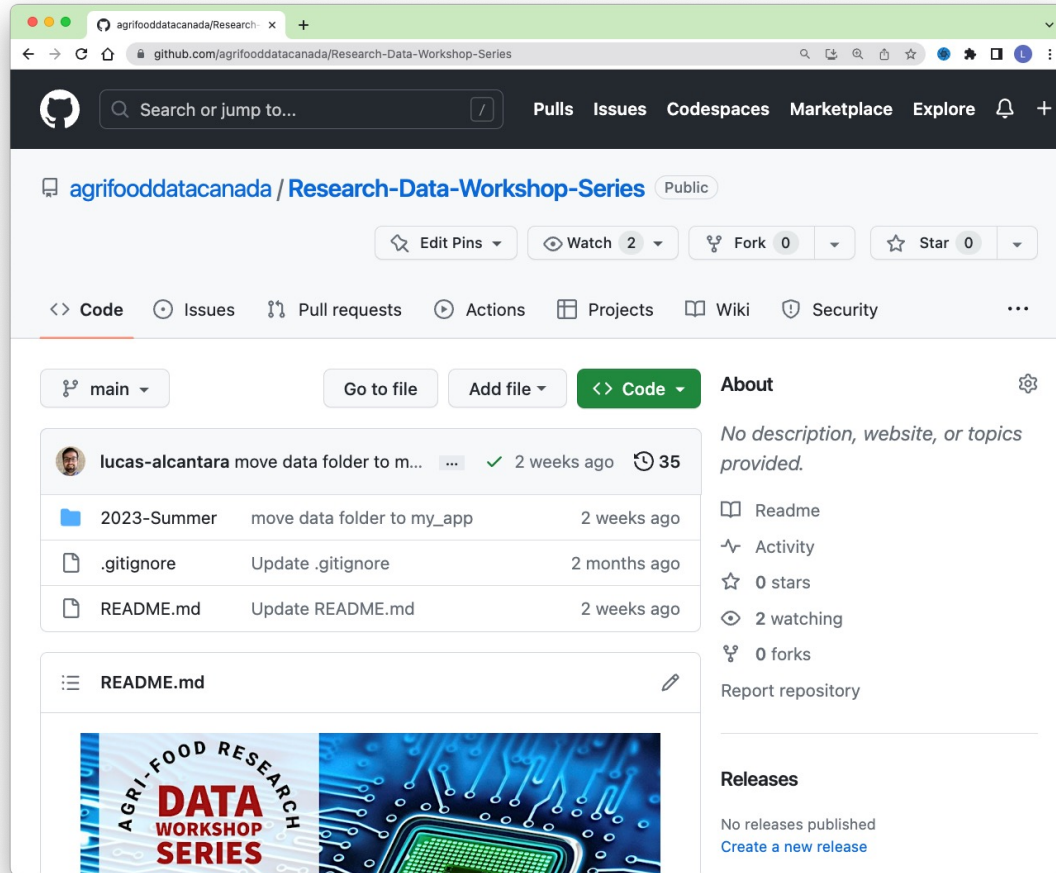
- A collaboration tool!

This screenshot shows a GitHub pull request for the repository 'Rinteface/bs4Dash'. The pull request is titled 'removed a comma #236' and was merged by DivadNojnarg on January 12, 2022. The commit message is 'removed a comma'. A comment from Duque-de-Sealand explains that the basic example from the bs4Dash.Rmd file could not be run due to an extra comma, which was removed. The pull request shows 1 commit, 13 checks, and 1 file changed. The right sidebar indicates no reviews, assignees, labels, projects, milestones, or development issues.

This screenshot shows a GitHub pull request for the repository 'Rinteface/bs4Dash'. The pull request is titled 'Update card fixes #209' and was merged by DivadNojnarg on May 17, 2021. The commit message is 'Update card fixes'. A comment from DivadNojnarg describes various improvements to the 'updateCard' function. The pull request shows 4 commits, 13 checks, and 85 files changed. The commit history includes 'start improve updateCard', 'rebuild doc', 'add extra colors (green, yellow,...) even though users are not suppos...', and 'fix tests'. The right sidebar indicates no reviews, assignees, labels, projects, milestones, or development issues.

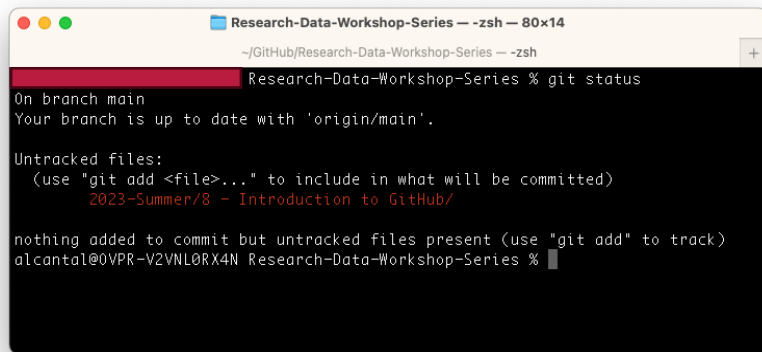
What is Git/GitHub?

- An ecosystem of version-controlled repositories/projects!



Git vs. GitHub

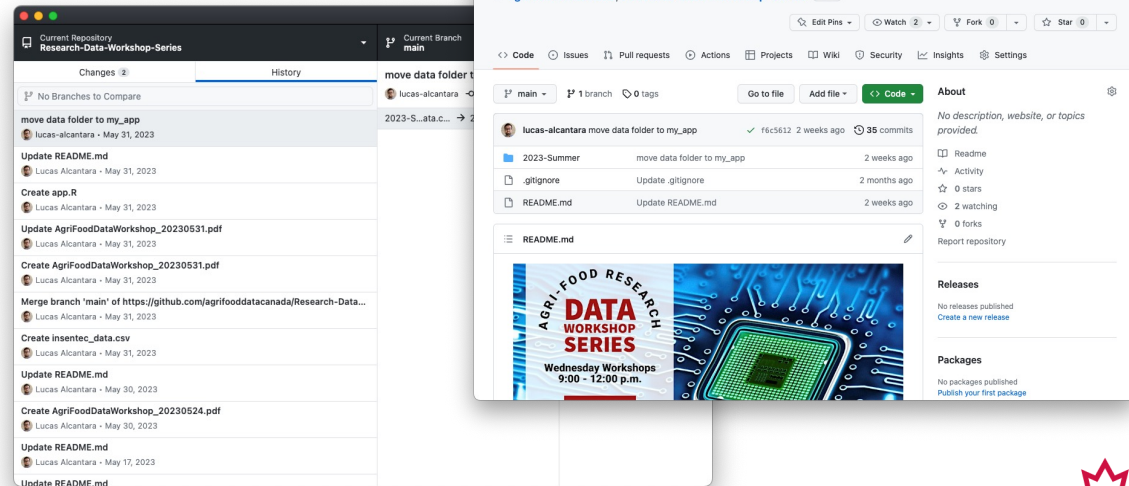
- Git is the command line software that handles version control on your repository
- When you use GitHub, Git is always doing the work behind the scenes
- GitHub is a service that hosts your repository online and helps you work with contributors/collaborators
- It's a web interface for version control
- Most often you will interface with GitHub (online) through the GitHub Desktop App or via the command line.



```
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)
alcantal@OVPR-V2VNL0RX4N Research-Data-Workshop-Series %
```



Git/GitHub (short) Glossary

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

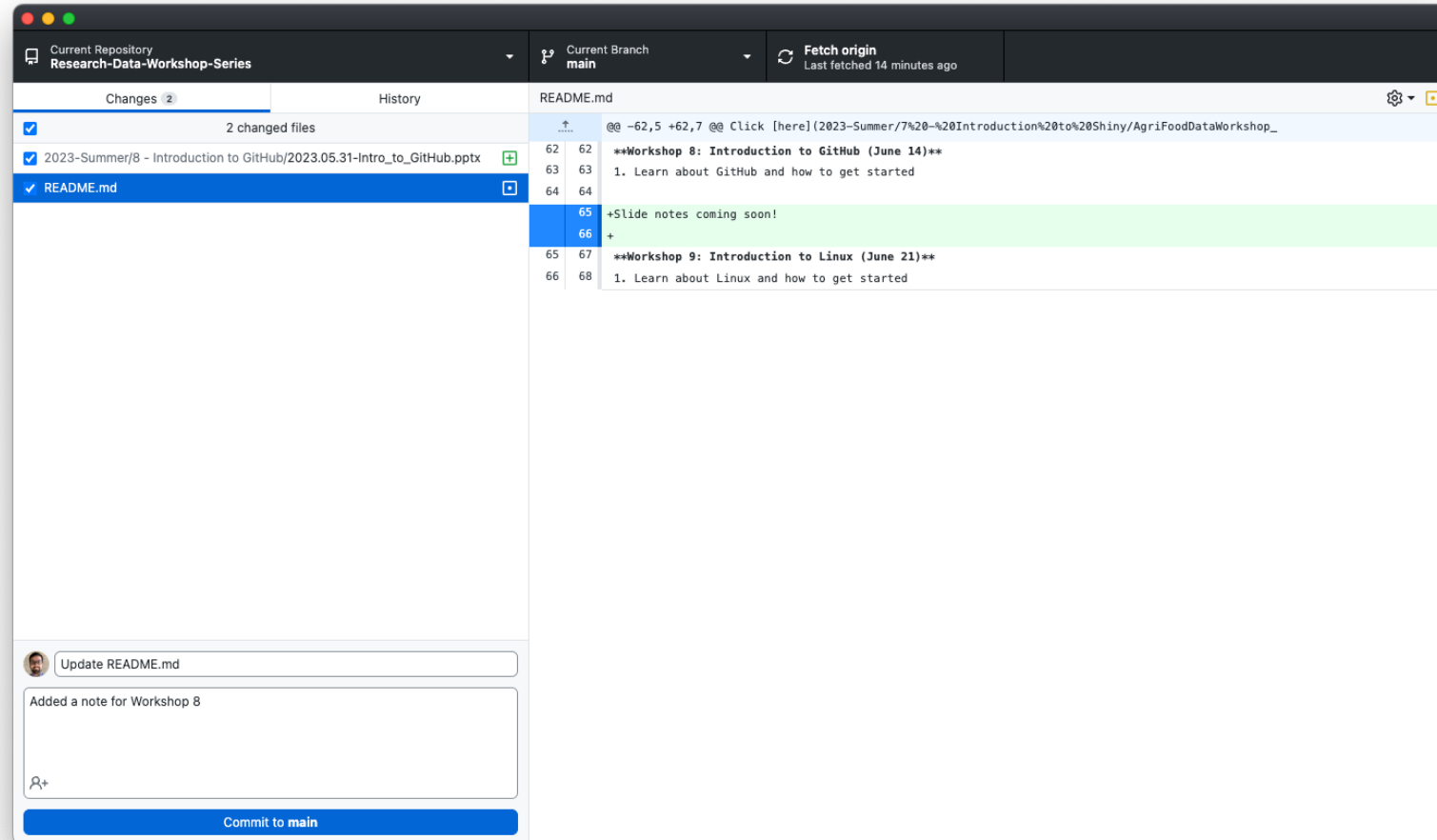
The image illustrates the relationship between a local file system and a GitHub repository. On the left, a browser window shows the GitHub page for the repository 'agrifooddatacanada / Research-Data-Workshop-Series'. The file 'app.R' is selected, and its code is displayed. The code defines a Shiny application with a title panel, a sidebar layout, and a sidebar panel for inputs. On the right, a local file explorer window shows the same file structure, including a 'my_app' folder and an 'app.R' file. The file explorer also shows a 'data' folder and a 'src' folder. The file explorer window is titled 'my_app' and shows a list of folders and files, including '2023-Summer', 'README.md', and a list of numbered folders from 1 to 8, plus a 'src' folder. The 'app.R' file is highlighted in blue. The file explorer also shows a file named 'AgriFoodDataW...op_20230531.pdf' and a folder named 'my_app'.

```
1 library(shiny)
2 library(tidyverse)
3 # Define UI for app that draws a histogram ----
4 ui <- fluidPage(
5
6   # App title ----
7   titlePanel(
8     tagList(
9       tags$b("My"),
10      tags$em("cool"),
11      tags$b("Dashboard")
12    )
13  ),
14
15  # Sidebar layout with input and output definitions ----
16  sidebarLayout(
17
18    # Sidebar panel for inputs ----
19    sidebarPanel(
20      h2("Upload your file here!"),
21      fileInput(inputId = "file_input",
22              label = "File Input",
23              placeholder = "Nothing here yet..."),
24      h2("Filter options"),
25      dateRangeInput(inputId = "date_range",
26                    label = "Date Filter"),
27      sliderInput(inputId = "intake",
```

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

The image displays a GitHub interface with two overlapping windows. The background window shows the commit history for the 'Research-Data-Workshop-Series' repository, listing several 'Update README.md' commits by 'lucas-alcantara' from May 10, 2023, to May 31, 2023. The foreground window shows a diff view for the 'Update README.md' commit (SHA: 5396a77). The diff highlights changes in the README.md file, including the addition of a section for 'Workshop 5: Introduction to R (May 10)' and updates to the 'Introduction' section. A context menu is open over the diff, offering actions like 'Revert Changes in Commit', 'Create Branch from Commit', 'Create Tag...', 'Cherry-pick Commit...', 'Copy SHA', 'Copy Tag', and 'View on GitHub'.

Commit: A “Save” of a file version

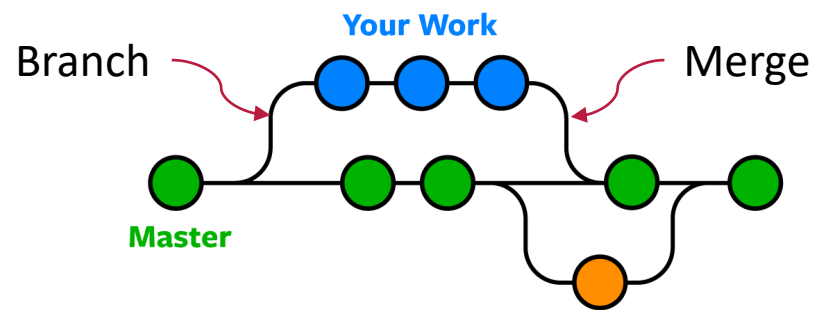


Branch / Merge: A working copy

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

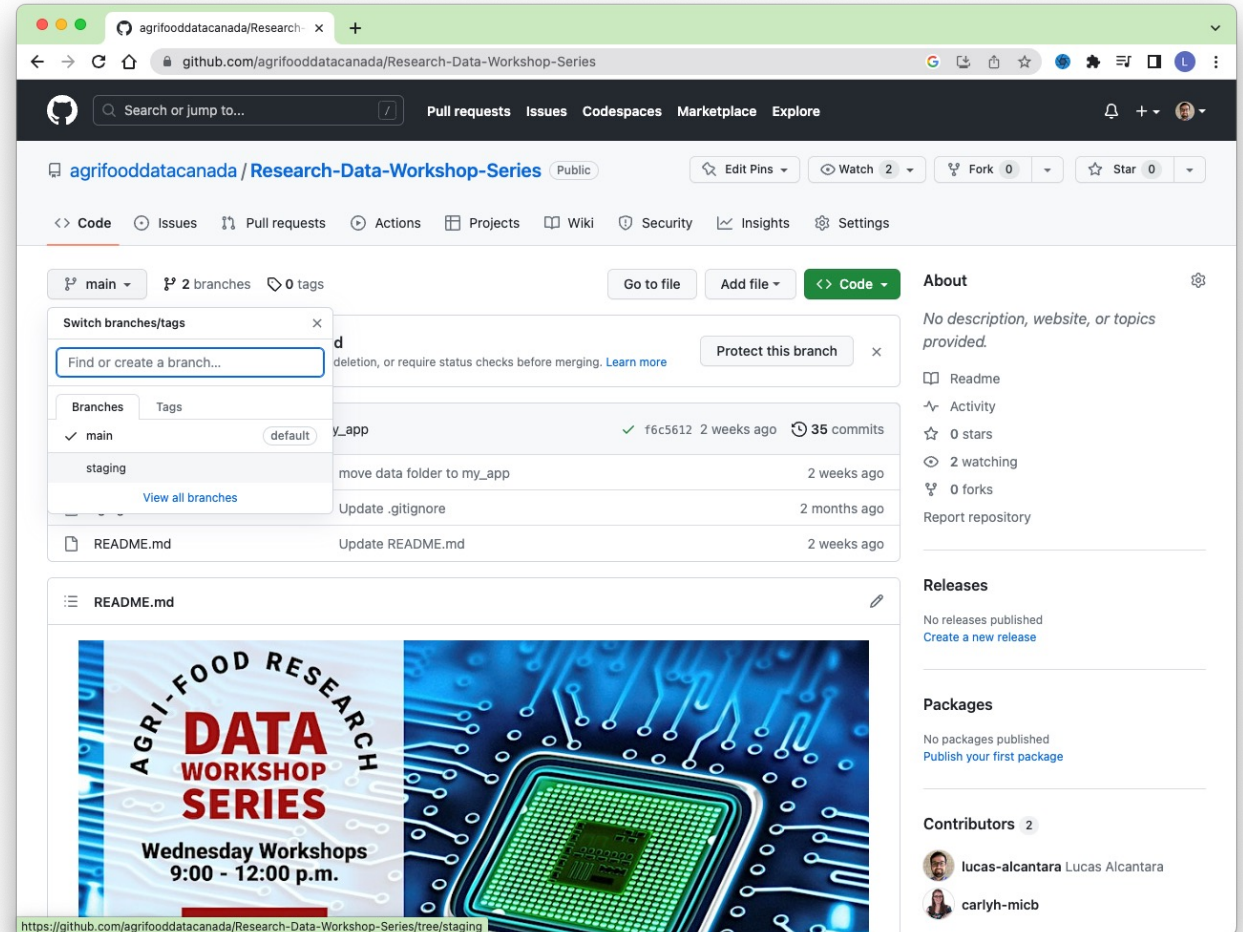
Allows you to experiment with new features without affecting the working parts of your project.

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



Someone Else's Work

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



Fork: A copy from a branch on GitHub

Existing forks

- lucas-alcantara/OCA_training_pathway

+ Create a new fork

carlyh-micb Update README.md ... 4b50336 2 weeks ago 246 commits

examples	Add files via upload	2 weeks ago
pictures	Update chicken_OCA_meta_hashes_highlighte...	2 weeks ago
templates	Update template v2.1	2 months ago
README.md	Update README.md	2 weeks ago
add_format_values.md	Update regex examples	2 months ago
create_first_schema.md	Update create_first_schema.md	2 weeks ago
deposit_schema.md	Update deposit_schema.md	2 weeks ago
drop_down_list_instru...	Update drop_down_list_instructions.md	5 months ago
identifiers_and_said...	Update identifiers_and_said...	2 weeks ago
parse_OCA_schema.md	Update parse_OCA_schema.md	2 weeks ago
semantic_engine.md	Update semantic_engine.md	3 weeks ago

Pathway to generating OCA data schemas

- Readme
- Activity
- 1 star
- 2 watching
- 4 forks

Report repository

Releases

No releases published

Packages

No packages published

https://github.com/agrifooddatacanada/OCA_training_pathway/fork

lucas-alcantara / OCA_training_pathway Public

forked from agrifooddatacanada/OCA_training_pathway

main 1 branch 0 tags

Go to file Add file Code

This branch is 69 commits behind agrifooddatacanada:main. Contribute Sync fork

lucas-alcantara Fix excel schema template link ... b6c219c last month 177 commits		
pictures	Create bee_drop_down_example.PNG	2 months ago
templates	Update template v2.1	2 months ago
README.md	Fix file name consistency	2 months ago
add_format_values.md	Update regex examples	2 months ago
create_first_schema.md	Fix excel schema template link	last month
deposit_schema.md	Update deposit_schema.md	4 months ago
drop_down_list_instru...	Update drop_down_list_instructions.md	5 months ago
identifiers_and_said...	Update identifiers_and_said...	4 months ago
parse_OCA_schema.md	Update parse_OCA_schema.md	4 months ago
semantic_engine.md	Create semantic_engine.md	6 months ago

About

Pathway to generating OCA data schemas

- Readme
- Activity
- 0 stars
- 0 watching
- 4 forks

Releases

No releases published

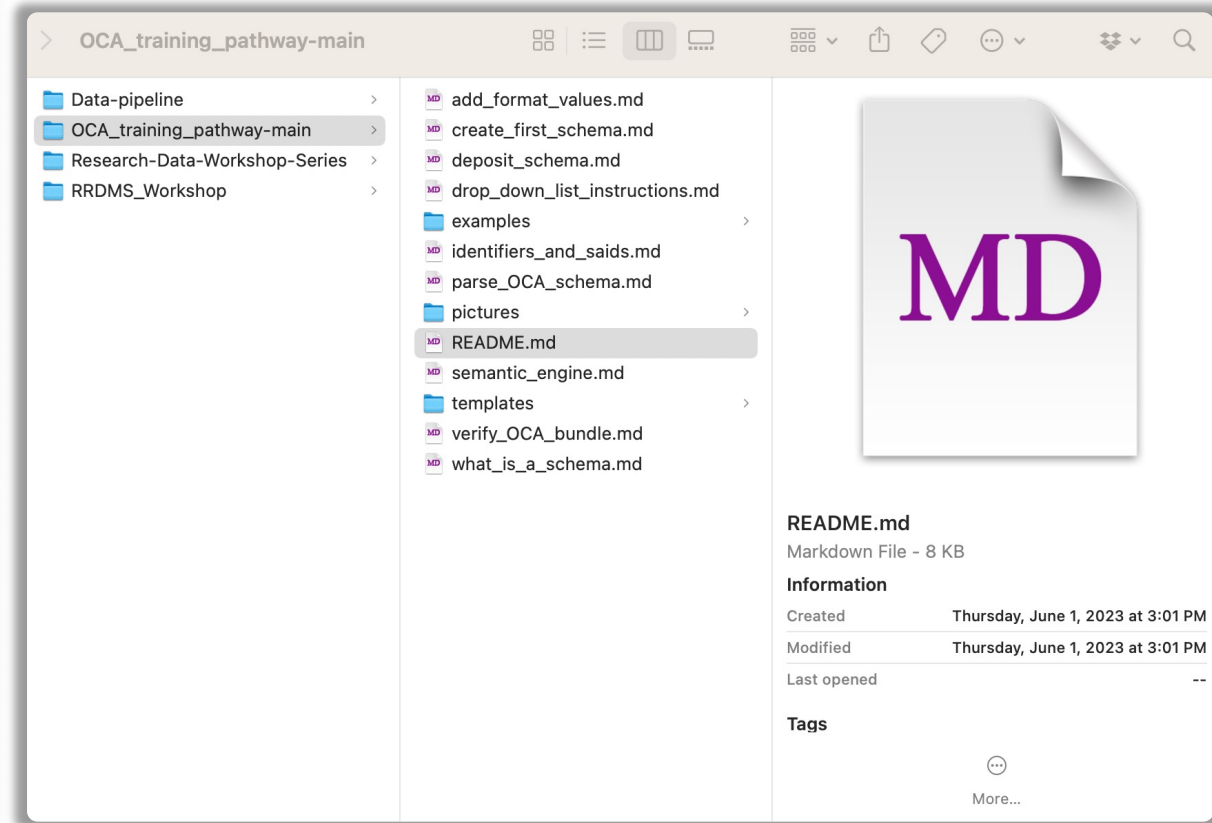
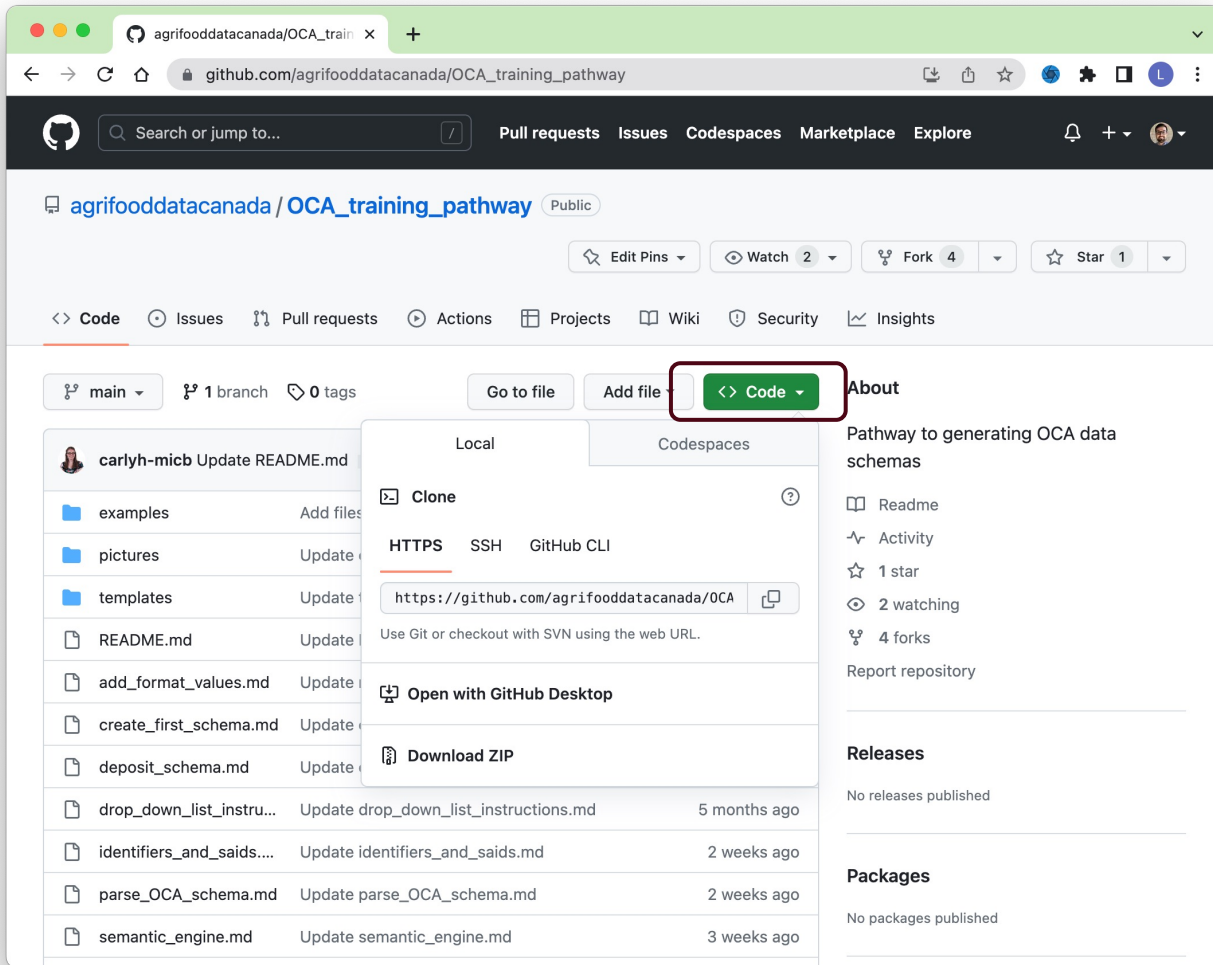
Create a new release

Packages

No packages published

Publish your first package

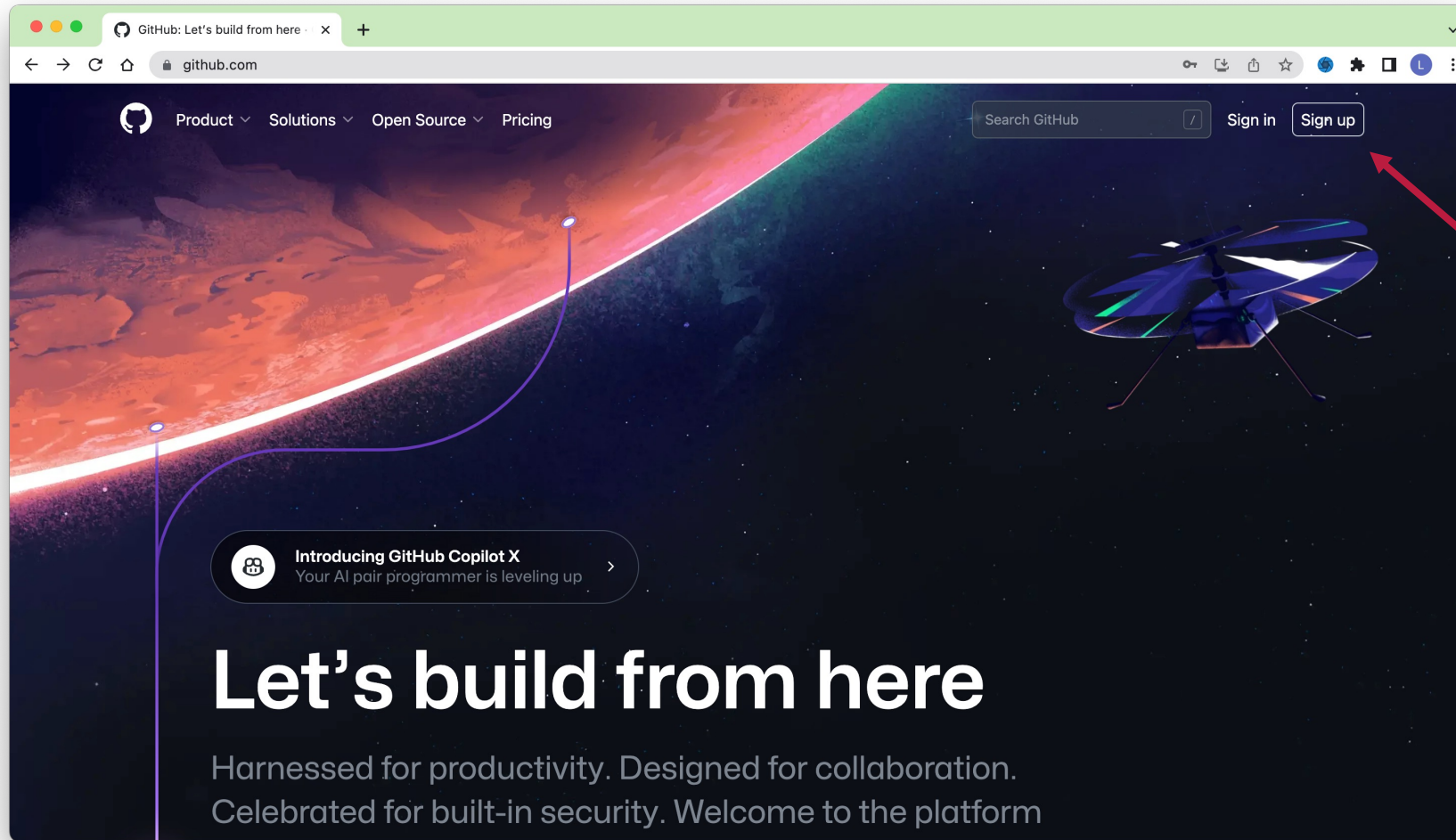
Clone: A copy from a branch on your local machine



**Let's have some
practice!**

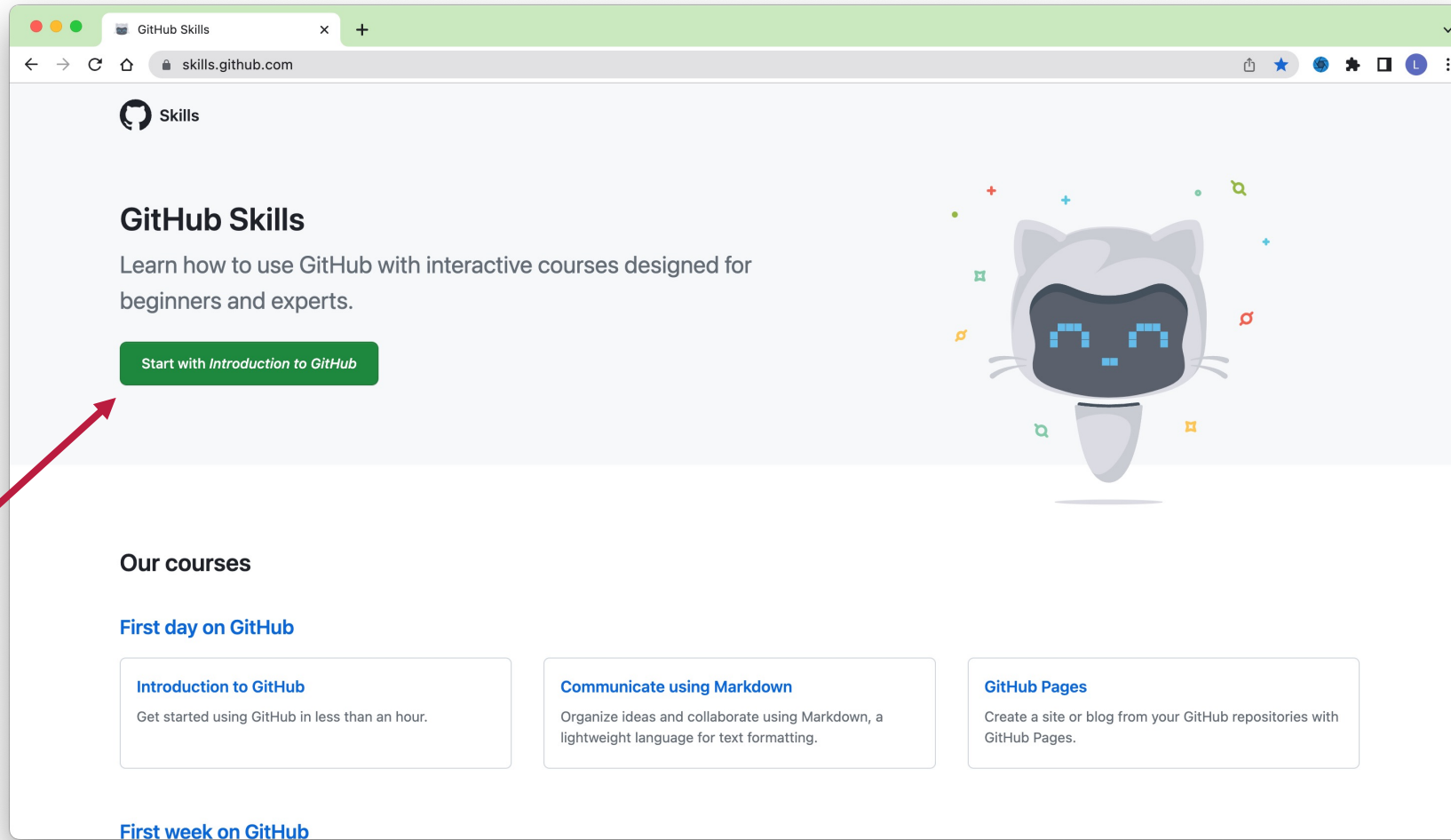
Sign up for a free account on GitHub

<https://github.com>



GitHub Skills

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



GitHub Desktop

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

File Edit View Repository Branch Help

Current repository: desktop

Current branch: esc-pr #3972

Fetch origin: Last fetched 2 minutes ago

Changes: History

Add event handler to dropdown component

iAmWillShepherd and Markus Olsson committed c79e71c 1 changed file

Co-Authored-By: Markus Olsson <nii@users.noreply.github.com>

app/src/ui/toolbar/dropdown.tsx

```
@@ -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<HTMLInputElement>) => {
+   if (!event.defaultPrevented && this.isOpen && event.key === 'Escape') {
+     event.preventDefault()
+   }
}
```

Windows

Current Repository: desktop

Current Branch: esc-pr #3972

Fetch origin: Last fetched 3 minutes ago

Changes: History

Add event handler to dropdown component

iAmWillShepherd and Markus Olsson committed c79e71c 1 changed file

Co-Authored-By: Markus Olsson <nii@users.noreply.github.com>

app/src/ui/t.../dropdown.tsx

```
@@ -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<HTMLInputElement>) => {
+   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



**AGRI-FOOD DATA
CANADA**

AT THE UNIVERSITY *of* GUELPH