



# Quarto + Positron

Part of "Doing data science in Positron" workshop

Posit Software, PBC



# **Positron is Quarto-ready out-of-the-box**

- Bundles Quarto CLI (or uses Quarto it finds on your path)
- Bundles Quarto VS Code Extension

# Demo

## Basic Workflow

- Open `hello.qmd`
- Preview button (aka Render button in RStudio)
  - Quarto commands are run in Terminal pane
  - Preview opens in Viewer pane
- Command: **Quarto: Preview format...**

Preview button

Opens in Viewer

hello.qmd — positron-workshop-project

SESSION HELP VIEWER CONNECTIONS

http://localhost:6004/ Zoom: 100%

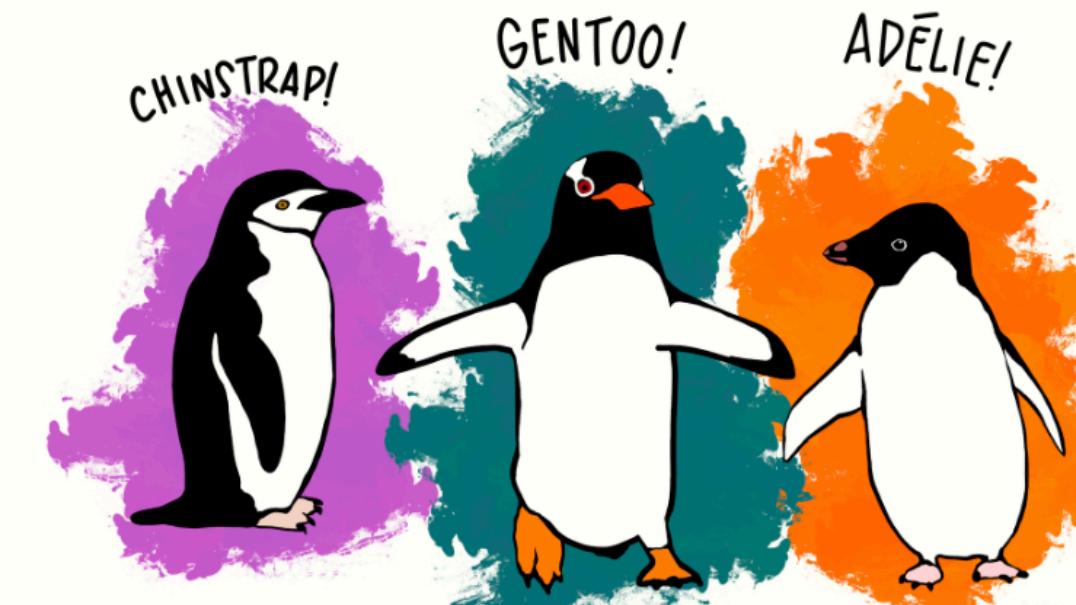
# Hello, Quarto

## Meet Quarto

Quarto enables you to weave together content and executable code into a finished document. To learn more about Quarto see <https://quarto.org>.

## Meet the penguins

The [palmerpenguins](#) package contains size measurements for 344 penguins from three species observed on three islands in the Palmer Archipelago, Antarctica.



The plot below shows the relationship between flipper and bill

Runs quarto preview in Terminal

```
get_studio/studio/lter_penguins.png; style= float:right;
fig alt+ Illustration of three species of Palmer Archipelago penguins
```

CONSOLE TERMINAL PROBLEMS OUTPUT ... Quarto Preview + □ 🔁 ...

```
posit/positron-workshop-project $ quarto preview /Users/charlottewickham/Documents/posit/positron-workshop-project/hello.qmd --no-browser --no-watch-inputs
title: Hello, Quarto
Output created: hello.html
Watching files for changes
Browse at http://localhost:6004/
Listening on http://127.0.0.1:6004/
```

main\* ↻ ⚪ 0 △ 0 Quarto: 1.8.11

Quarto version

Content and executable code about Quarto see

# Command: Quarto: Preview format ...

The penguins data from the palmerpenguins package contains size measurements for 344 penguins from three species observed on three islands in the Palmer Archipelago, Antarctica.

The plot below shows the relationship between flipper and bill

```
hello.qmd
1 ---  
2 title: "Hello, Quarto"  
3 format:  
4   html: default  
5   pdf: default  
6 ---  
7  
8 `r}  
9 #| label: load-packages  
10 #| include: false  
11  
CONSOLE TERMINAL ...  
posit/positron-workshop-project $  
ers/charlottewickham/Documents/posit/positron-worksh  
op-project/hello.qmd --no-browser --no-watch-inputs  
  
pandoc  
  to: html  
  output-file: hello.html  
  standalone: true  
  section-divs: true  
  html-math-method: mathjax  
  wrap: none  
  default-image-extension: png  
  variables: {}  
  
metadata  
  document-css: false  
  link-citations: true  
  date-format: long  
  lang: en  
  title: Hello, Quarto  
  
Output created: hello.html  
  
Watching files for changes  
Browse at http://localhost:3482/  
Listening on http://127.0.0.1:3482/
```

Preview HTML  
format: html

Preview PDF (LaTeX)  
format: pdf

Preview PDF (Typst)  
format: typst

Preview MS Word  
format: docx

R 4.3.3 positron-workshop-project

Zoom: 100%

Charlotte Wickham (1 week ago) Ln 5, Col 15 Spaces: 2 UTF-8 LF {} Quarto

# Your turn

## Quarto Commands

- Open Command Palette
- Skim Quarto: actions
- Pick one and try it

3m 00s

Quarto: |

Quarto: Preview Format... recently used

Quarto: Clear Cache... F1 other commands

Quarto: Create Project

Quarto: Edit in Visual Mode

Quarto: Edit Mode

Quarto: Format Cell

Quarto: Go to Next Cell

Quarto: Go to Previous Cell

Quarto: Insert Code Cell

Quarto: New Document

Quarto: New Notebook (ipynb)

Quarto: New Presentation

Quarto: Pin Assist Panel

Quarto: Preview

CONSOLE TERMINAL ...

```
posit/positron-workshop-project $ quarto preview /Users/charlottewickham/Documents/posit/positron-workshop-project/hello.qmd --no-browser --no-watch-inputs
4/4 [plot-penguins]
output file: hello.knit.md
```

pandoc

```
to: html
output-file: hello.html
standalone: true
section-divs: true
html-math-method: mathjax
wrap: none
default-image-extension: png
variables: {}
```

metadata

```
document-css: false
link-citations: true
date-format: long
lang: en
title: Hello, Quarto
```

Output created: hello.html

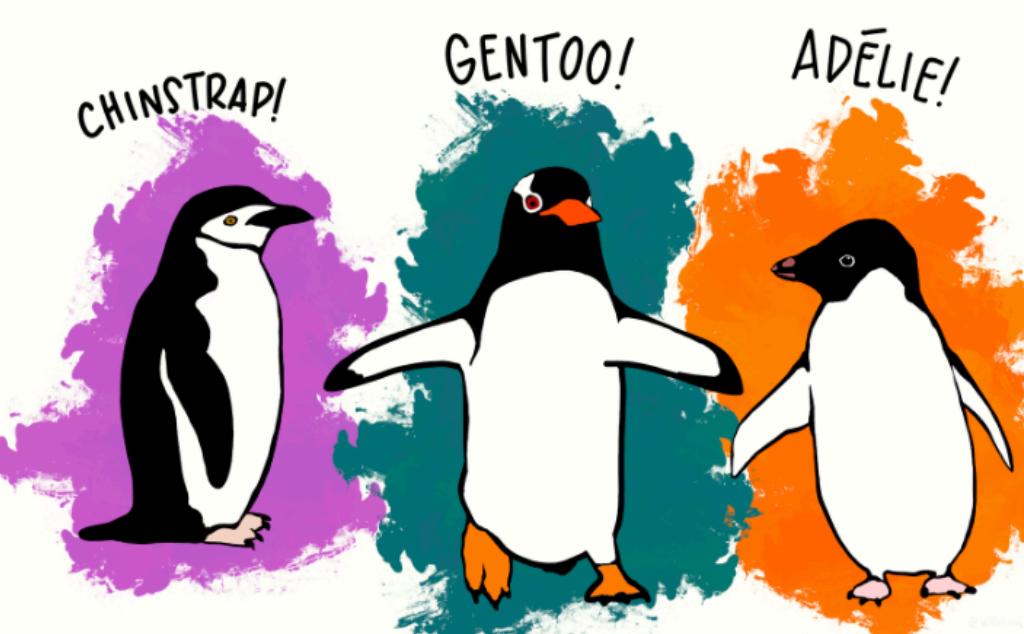
Watching files for changes

Connections Zoom: 100%

Meet the penguins

The penguin data from the palmerpenguins package contains size measurements for 344 penguins from three species observed on three islands in the Palmer Archipelago, Antarctica.

The plot below shows the relationship between flipper and



CHINSTRAP! GENTOO! ADÉLIE!

Charlotte Wickham (1 week ago) Ln 5, Col 15 Spaces: 2 UTF-8 LF {} Quarto

# Demo

## Document Workflow

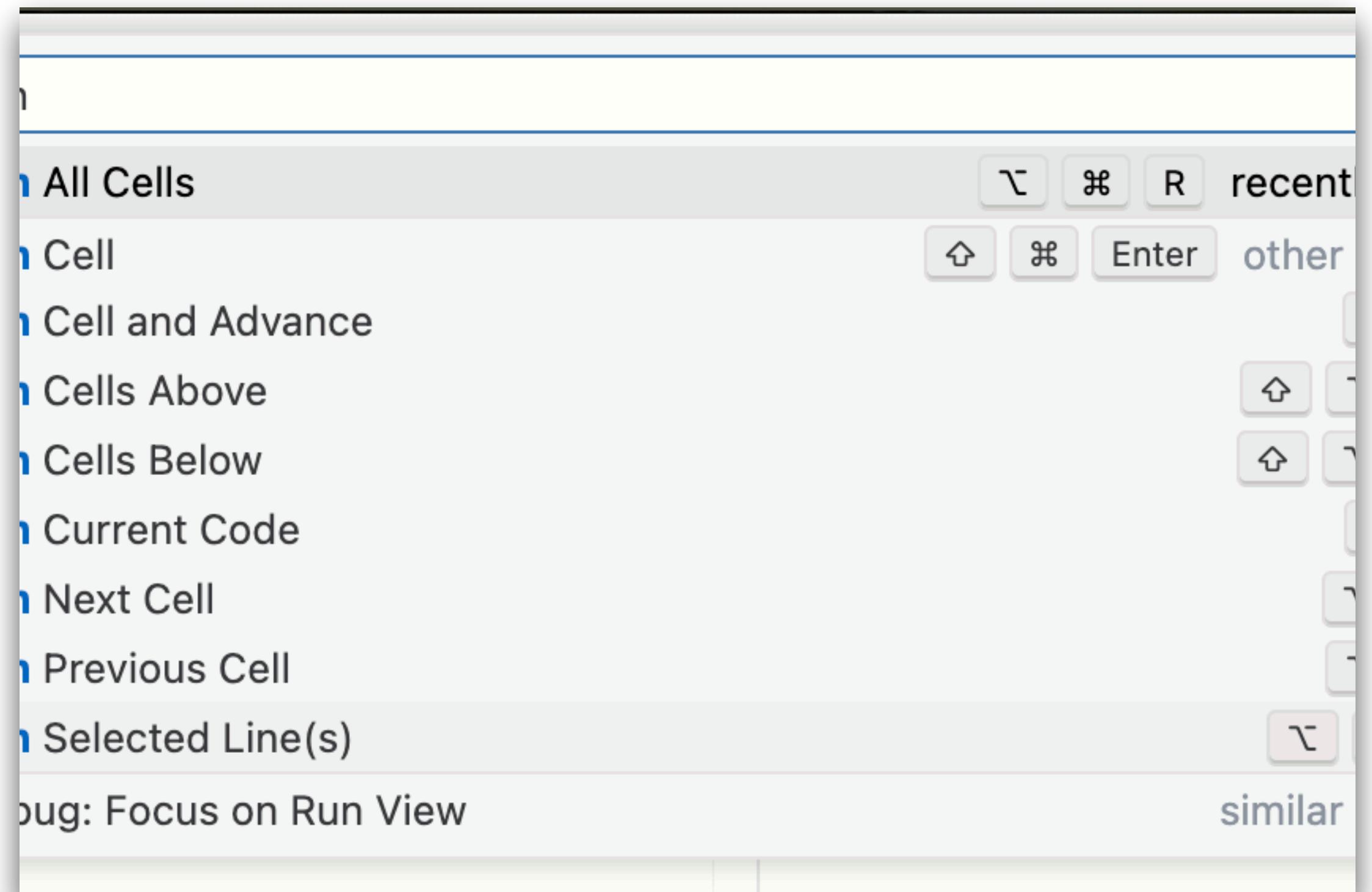
- Code cells
  - Run Selection: cmd/ctrl+enter
  - Run Cell: shift+cmd/ctrl+enter
  - Command Palette: **Quarto: Run ...**
- Navigation: Breadcrumbs, Outline pane, Command palette: **Go to Symbol in Editor**
- Visual mode
  - Insert Anything: /

# Code Cells

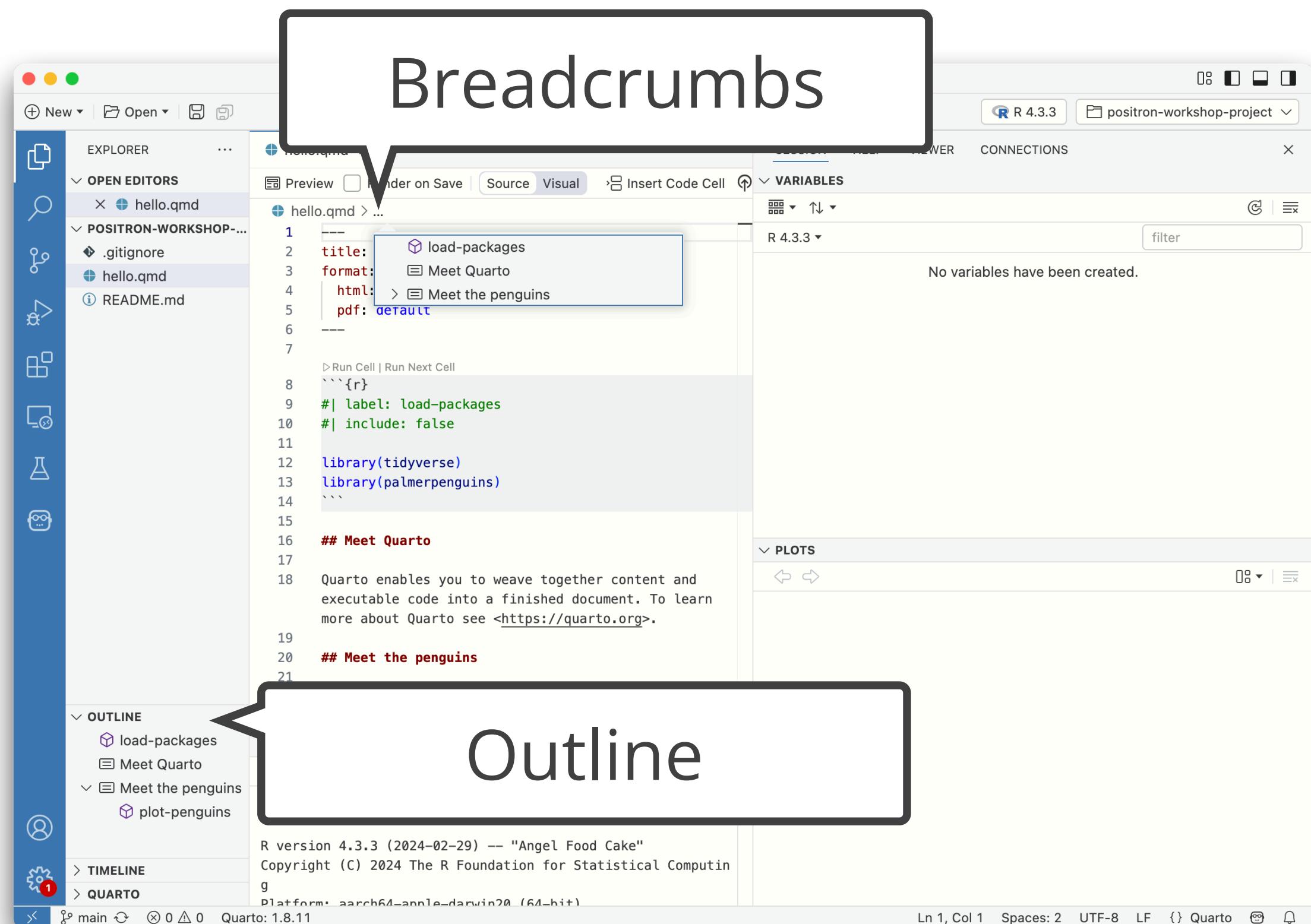
Commands:  
Quarto: Run ...

The screenshot shows the Quarto RStudio extension interface. A large callout box labeled "Run actions" points to the "Run Cell | Run Next Cell" button located in the toolbar above the code editor. The code editor displays a QMD file named "hello.qmd". The file contains R code for loading packages, setting the title, and displaying penguins data. The "PLOTS" panel is visible below the code editor.

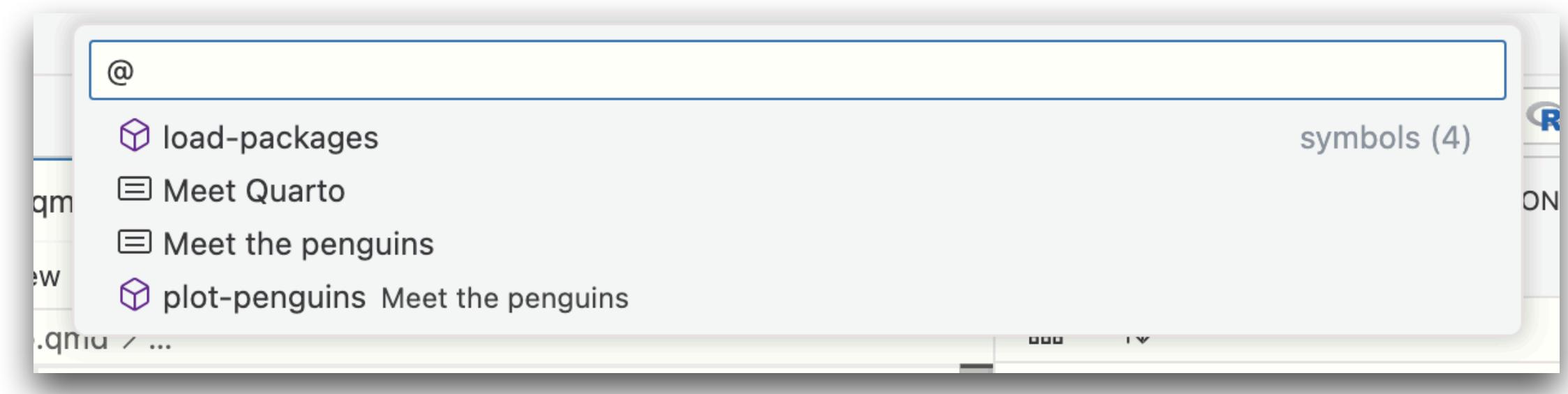
```
1 ---  
2 title: "Hello, Quarto"  
3 format:  
4   html: default  
5   pdf: default  
6 ---  
7 > Run Cell | Run Next Cell  
8 `r`  
9 #| label: load-packages  
10 #| include: false  
11  
12 library(tidyverse)  
13 library(palmerpenguins)  
14  
15  
16 ## Meet Quarto  
17  
18 Quarto enables you to weave together content and executable code  
19 into a finished document. To learn more about Quarto see <https://quarto.org>.  
20  
21 ## Meet the penguins  
22 
```



# Navigation



Command:  
**Go to Symbol in Editor**



# Visual Mode

The screenshot shows the Quarto Visual Mode interface. At the top, there are two tabs: "Source" (which is selected) and "Visual". Below the tabs is a toolbar with various icons for text styling and document structure. The main content area displays a QMD file named "hello.qmd" with the following code:

```
---  
title: "Hello, Quarto"  
format:  
  html: default  
  pdf: default  
---  
  
{r}  
1 #| label: load-packages  
2 #| include: false  
3  
4 library(tidyverse)  
5 library(palmerpenguins)
```

Below the code, there are two sections: "Meet Quarto" and "Meet the penguins". The "Meet Quarto" section contains a paragraph about Quarto and a link to its website. The "Meet the penguins" section contains a button labeled "The penguins".

A large callout box labeled "Source/Visual Toggle" points to the "Source" tab at the top.

In the second screenshot, a context menu is open over the code block. The menu items are:

- Python Code Cell (Executable Python cell)
- Julia Code Cell (Executable Julia cell)
- R Code Cell (Executable R cell)
- Citation... (Reference to a source)
- Cross Reference (Reference to related content)
- Symbol... (Unicode symbol / special character)

A callout box labeled "Insert Anything: type /" points to the menu icon in the bottom-left corner of the menu.

# Your turn

## Authoring

- Figure out how to:
  - Create a new Quarto document
  - Insert a code cell
- Then, practice anything else you've seen

5<sub>m</sub> 00<sub>s</sub>

## New > New File...

The screenshot shows the Quarto Document interface. A modal dialog titled "New File..." is open at the top. The main area displays a Quarto document titled "Hello, Quarto". The code includes R code for loading packages and a penguin image. The interface has a dark theme with blue highlights.

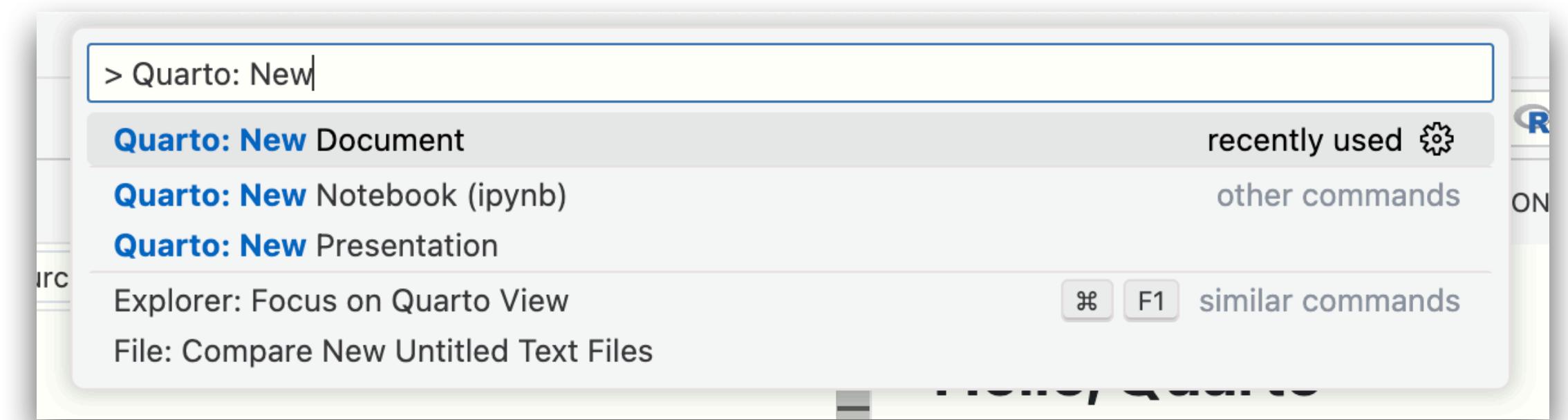
```
1 ---  
2 title: "Hello, Quarto"  
3 format:  
4   html: default  
5   pdf: default  
6 ---  
7  
8 ---{r}  
9 #| label: load-packages  
10 #| include: false  
11  
12 library(tidyverse)  
13 library(palmerpenguins)  
14  
15  
16 ## Meet Quarto  
17  
18 Quarto enables you to weave together content and executable code  
into a finished document. To learn more about Quarto see https://quarto.org
```

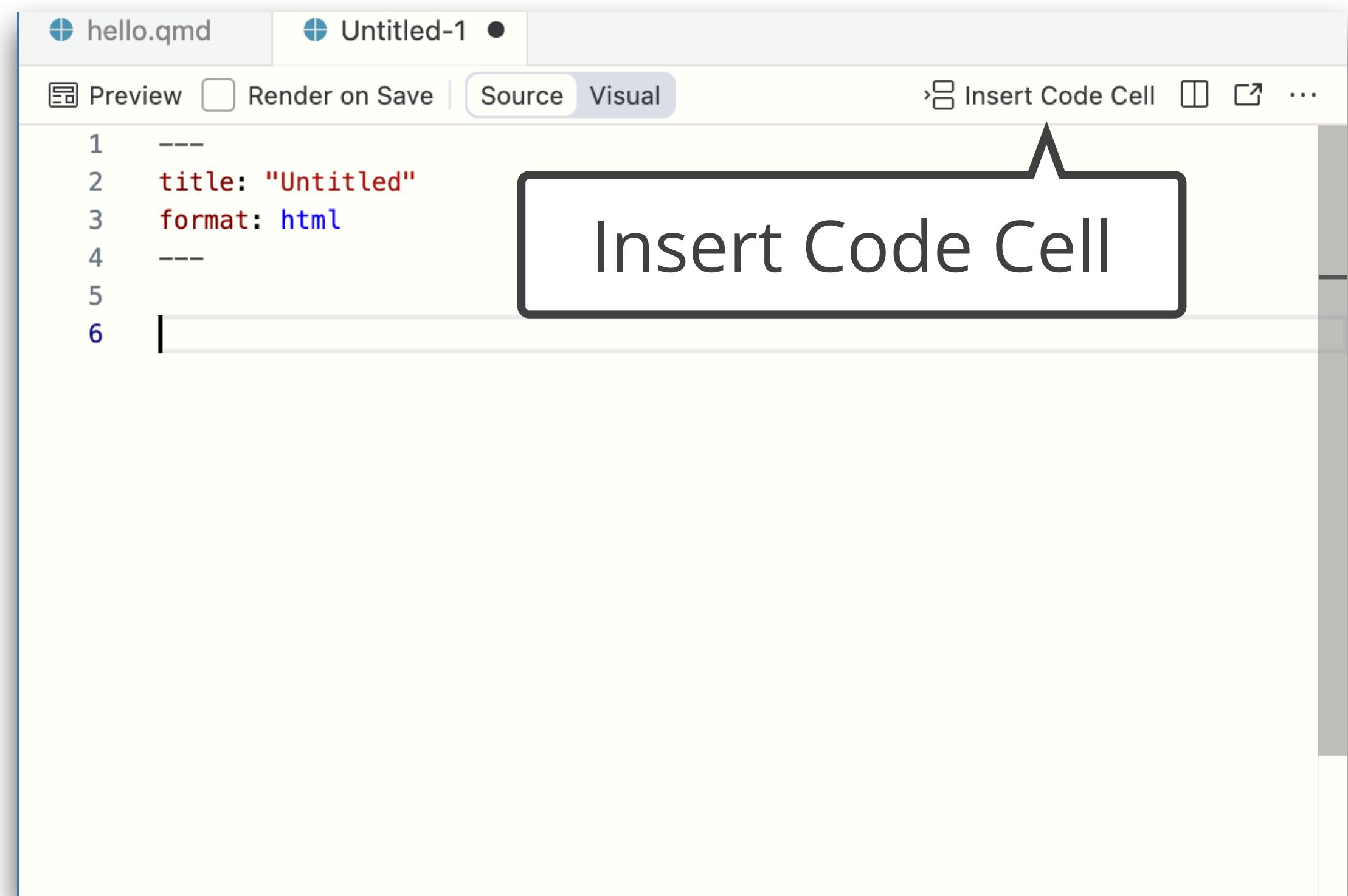
Meet the penguins

The penguins data from the palmerpenguins package contains size measurements for 344 penguins from three species observed on three islands in the Palmer Archipelago, Antarctica.

The plot below shows the relationship between flipper and bill

## Command: Quarto: New Document

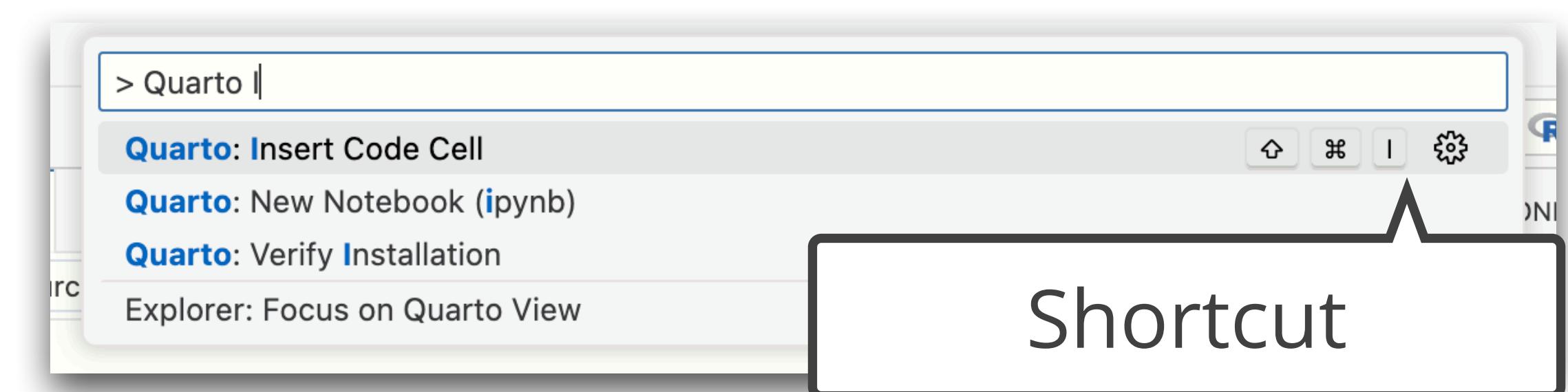




```
1 ---  
2 title: "Untitled"  
3 format: html  
4 ---  
5  
6
```

Command:

## Quarto: Insert Code Cell



Shortcut

# What's different?

- No inline preview of code output (aka **Chunk Output Inline** in RStudio)
- No push button publishing except to Posit Connect via [Posit Publisher](#) extension
- RMarkdown (.Rmd) files preview via Quarto.  
Command palette: **R: Render with Document RMarkdown**

# Updating Quarto

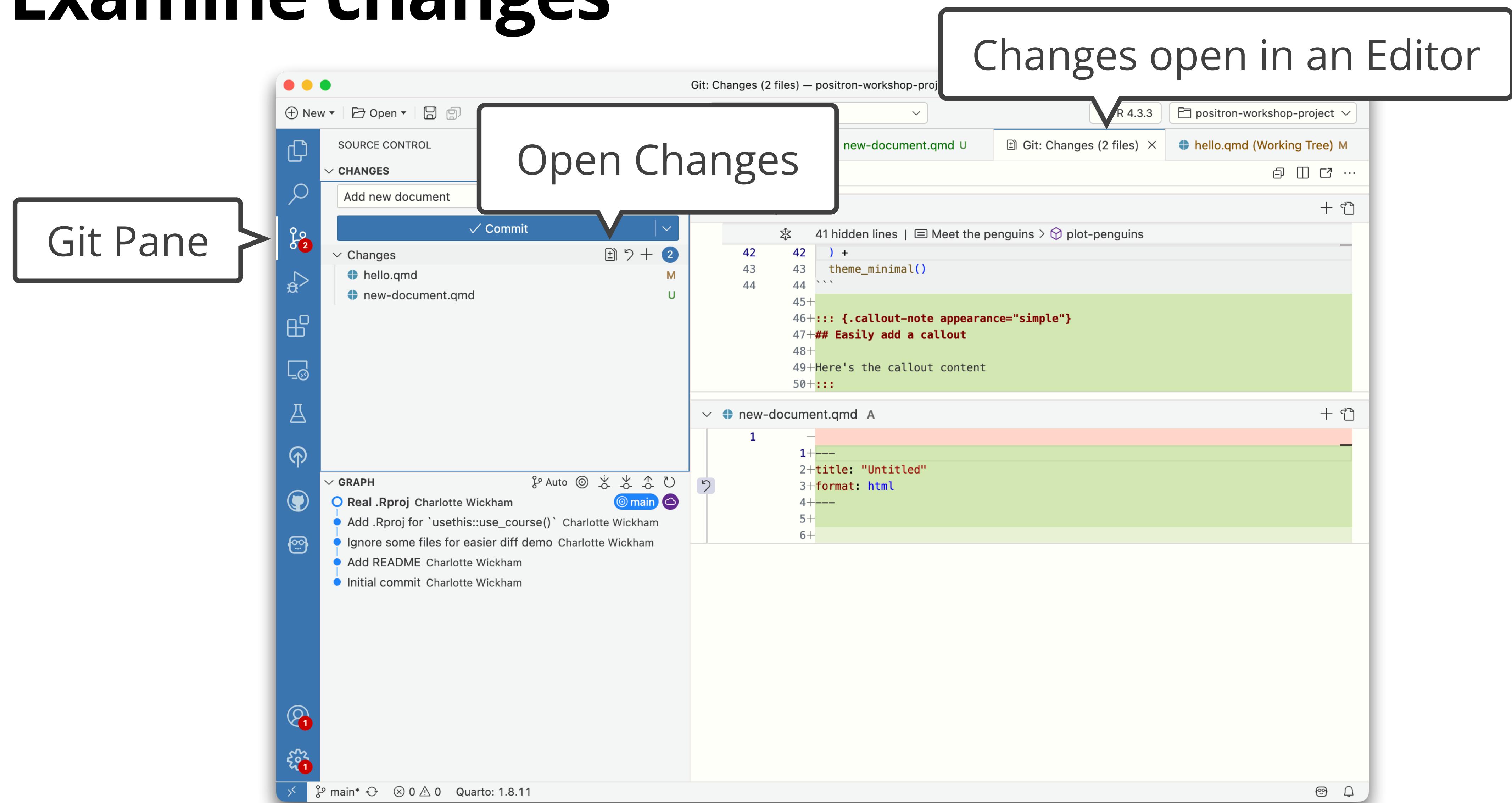
- **Strategy 1:** Rely entirely on Positron's bundled Quarto
  - Get updates as Positron is updated (⚙️ Setting: Update: Auto Update)
  - Currently, no easy way to use this version outside of Positron
- **Strategy 2:** Manage Quarto outside of Positron
  - Update manually from quarto.org
  - Positron will prefer the manually installed version, even if it is older
  - You can specify a specific Quarto with ⚙️ Setting: Quarto: Path

# Demo

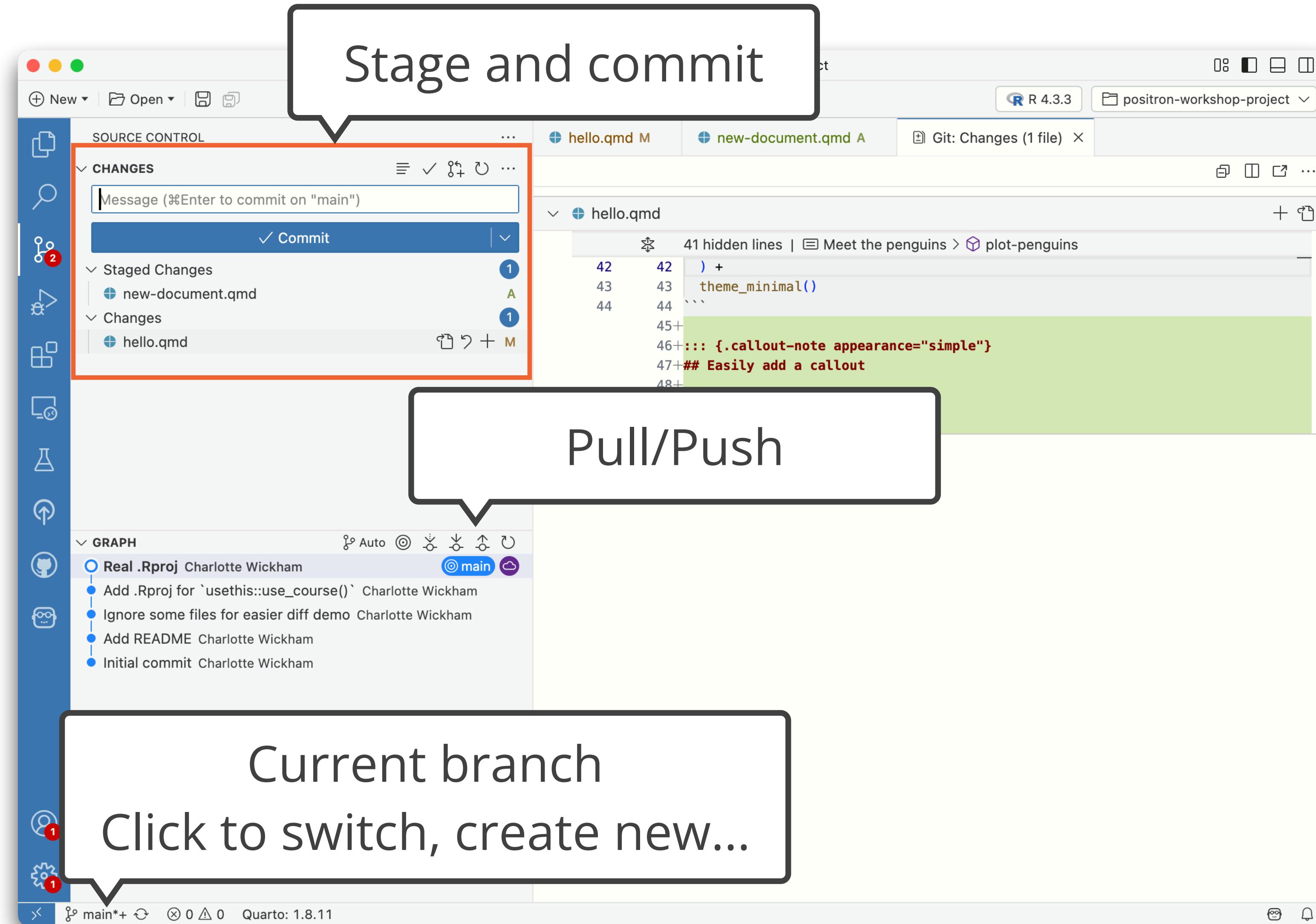
## Git Pane

- Changes Pane
  - **Open Changes** closest to RStudio's diff
  - Changes open in Editor
  - Add, Commit
- Graph Pane
  - Pull/Push
  - Like RStudio's History view
- Current Branch
  - Click to get branch actions

# Examine changes



# Git workflow



# Learn more

**Quarto docs:** Guide > Tools > Positron

<https://quarto.org/docs/tools/positron/>

**VS Code docs:** Source Control

<https://code.visualstudio.com/docs/sourcecontrol/overview>