

# Markdown versus Quarto

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# Why This Talk?

- You've heard of Quarto but you're not sure what it is
- You're using R Markdown because it's what you started with
- You're asking: *Should I switch? Is it worth it?*

# What's a Dynamic Document?

- Code + output + commentary in one file
- Renders into HTML, PDF, Word, slides, etc.
- Great for reproducibility, collaboration, and avoiding copy-paste chaos

# Why They're Useful

- Improve reproducibility and transparency
- Update outputs automatically as data or code changes
- Support multiple audiences (technical and non-technical)

# What's Markdown?

- Plain text formatting syntax — easy to write, easy to read
- A “step up” from a `.txt` file
- Add **rich text elements** (e.g., bold, italics, lists, etc.) to plain text
- Used widely in GitHub, documentation, and academic writing

# Markdown Language

```
1 # Quackston CV
2
3 My name is Quackston.
4 I like debugging stats code.
5
6 ## Skills
7
8 - Debugging expertise
9
10 ## Experience
11
12 [Hyperlink] (https://c7091.github.io/website/)
```

```
1 Heading 1
2
3 Normal text
4 Italics
5
6 Heading 2
7
8 Bullet point
9
10 Heading 2
11
12 Hyperlinked text
```

# What is R Markdown?

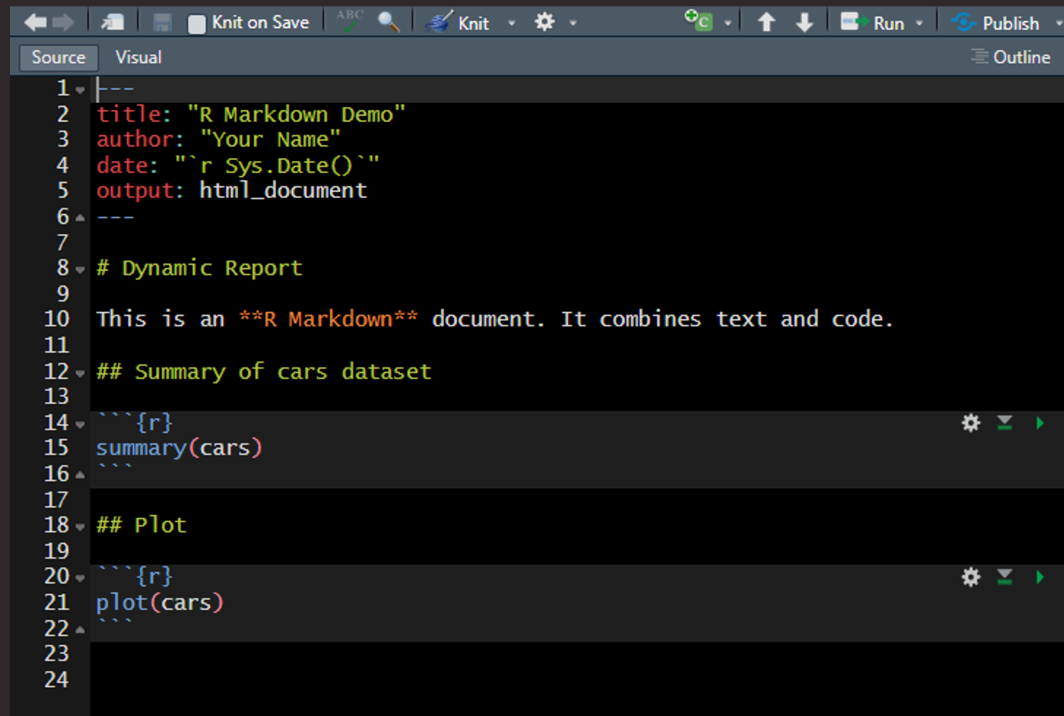
- *Literate programming* — code + prose in one place
- `.Rmd` files with:
  - Markdown text
  - Embedded R code chunks

# R Markdown Workflow

- When you **Knit**, it:
  - Runs the code
  - Renders results alongside narrative
  - Exports to HTML, Word, PDF, etc.
- Great for teaching, reproducible reporting, and sharing analyses



# Typical R Markdown



The image shows a code editor window with a dark theme. The editor displays the source code of an R Markdown document. The code is as follows:

```
1 |---
2 |title: "R Markdown Demo"
3 |author: "Your Name"
4 |date: "`r Sys.Date()`"
5 |output: html_document
6 |---
7 |
8 |# Dynamic Report
9 |
10 |This is an R Markdown document. It combines text and code.
11 |
12 |## Summary of cars dataset
13 |
14 |```{r}
15 |summary(cars)
16 |```
17 |
18 |## Plot
19 |
20 |```{r}
21 |plot(cars)
22 |```
23 |
24 |
```

The editor interface includes a toolbar at the top with icons for navigation, saving, and running. Below the toolbar are tabs for 'Source' and 'Visual', and an 'Outline' icon on the right. Line numbers are visible on the left side of the code editor.

# Typical R Markdown

```
1 |---|
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4 |date: "`r Sys.Date()`"|
5 |output: html_document|
6 |---|
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23 |
24 |
```



Files Plots Packages Help Viewer Presentation  
Sync Editor

## R Markdown Demo

Your Name  
2025-05-12

### Dynamic Report

This is an **R Markdown** document. It combines text and code.

### Summary of cars dataset

```
summary(cars)
```

##	speed	dist
##	Min. : 4.0	Min. : 2.00
##	1st Qu.:12.0	1st Qu.: 26.00
##	Median :15.0	Median : 36.00
##	Mean :15.4	Mean : 42.98
##	3rd Qu.:19.0	3rd Qu.: 56.00
##	Max. :25.0	Max. :120.00

### Plot

```
plot(cars)
```

A scatter plot showing the relationship between speed (x-axis) and distance (y-axis) for the cars dataset. The x-axis ranges from 0 to 25, and the y-axis ranges from 0 to 120. The plot shows a positive correlation, with distance increasing as speed increases. The data points are represented by small circles.

# Why R Markdown is Great

- Simple and intuitive
- Works well in RStudio
- Big ecosystem: [bookdown](#), [blogdown](#), [xaringan](#)

# Where It Struggles

- Only really supports R
- Needs extensions for slides, books, blogs
- YAML config differs by format
- Harder to manage bigger projects

# Meet Quarto

- Released in 2022 by the same folks behind R Markdown
- An open-source scientific and technical publishing system
- Next generation of R Markdown
  - Unifies and improves the R markdown ecosystem
  - Extends it for people who don't know R markdown

# Why Quarto?

- Computational docs and scientific markdown made easy for single source publishing
- Designed from the start as a multi-engine system
- An attempt to bring together 10+ years experience of R markdown to everyone

# How Quarto Works

- Not tied to specific language like R Markdown
- Command line interface
- Renders plain text or mixed text formats into static outputs

# Built-In Output Options

- Reports (HTML, PDF, Word)
- Dashboards
- Slides (Reveal.js, Beamer)
- Books
- Websites & blogs
- [Quarto Gallery](#)



# Quarto Projects

- General Project
- Website
- Blog
- Book
- Manuscript
- Pre-loads with files/folders to help get started

# Demo



# What's Better About Quarto?

- No more YAML guessing games — format config is consistent across outputs
- Multi-language by design (no Python hacks)
- Slides, blogs, books — all native, no bolt-on packages
- `_quarto.yml` makes multi-file projects way easier
- Works in more places: RStudio, VS Code, or terminal

# R Markdown vs Quarto

Feature	R Markdown	Quarto
R Support	Yes	Yes
Python/Julia	Workarounds	Native
Slides/Books/Websites	Add-ons needed	Built-in
Multi-file Projects	Manual	<code>_quarto.yml</code>
Editor Support	RStudio only	RStudio + VS Code

# Should You Move?

- Move if:
  - You're starting fresh
  - You want cleaner multi-format publishing
  - You use more than just R
  - You want better config control
- Stick with R Markdown if:
  - Your workflow is small and stable
  - You're solo and R-only

# Round up

- R Markdown still works — but Quarto does more
- Same mindset, better tools
- Switch when you're ready, or start with your next new thing

# Questions?



Harper Adams R Users Group

# Handy Links

[Quarto Quickstart](#)

[Quarto User Guide](#)

[Markdown Syntax](#)

