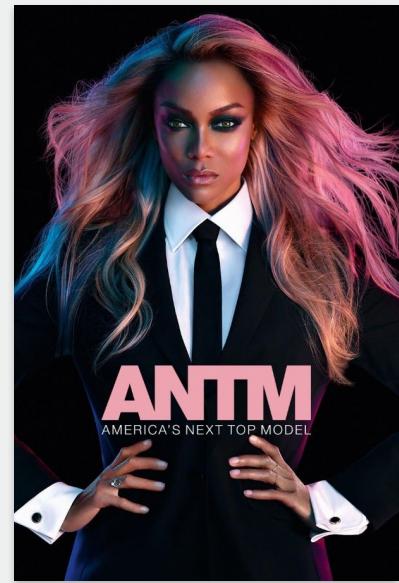


# What an early 2000s reality show taught me about file management

Reiko Okamoto



[bit.ly/posit-conf-2023-neat](https://bit.ly/posit-conf-2023-neat)



Images: IMDb



*Images: Hellen Buttigieg's YouTube channel*



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Images: Hellen Buttigieg's YouTube channel



Images: Hellen Buttigieg's YouTube channel

*“Clutter in our space is usually clutter in our minds as well.”*

- Hellen Buttigieg, Host of Neat

# Zones (or lack thereof)

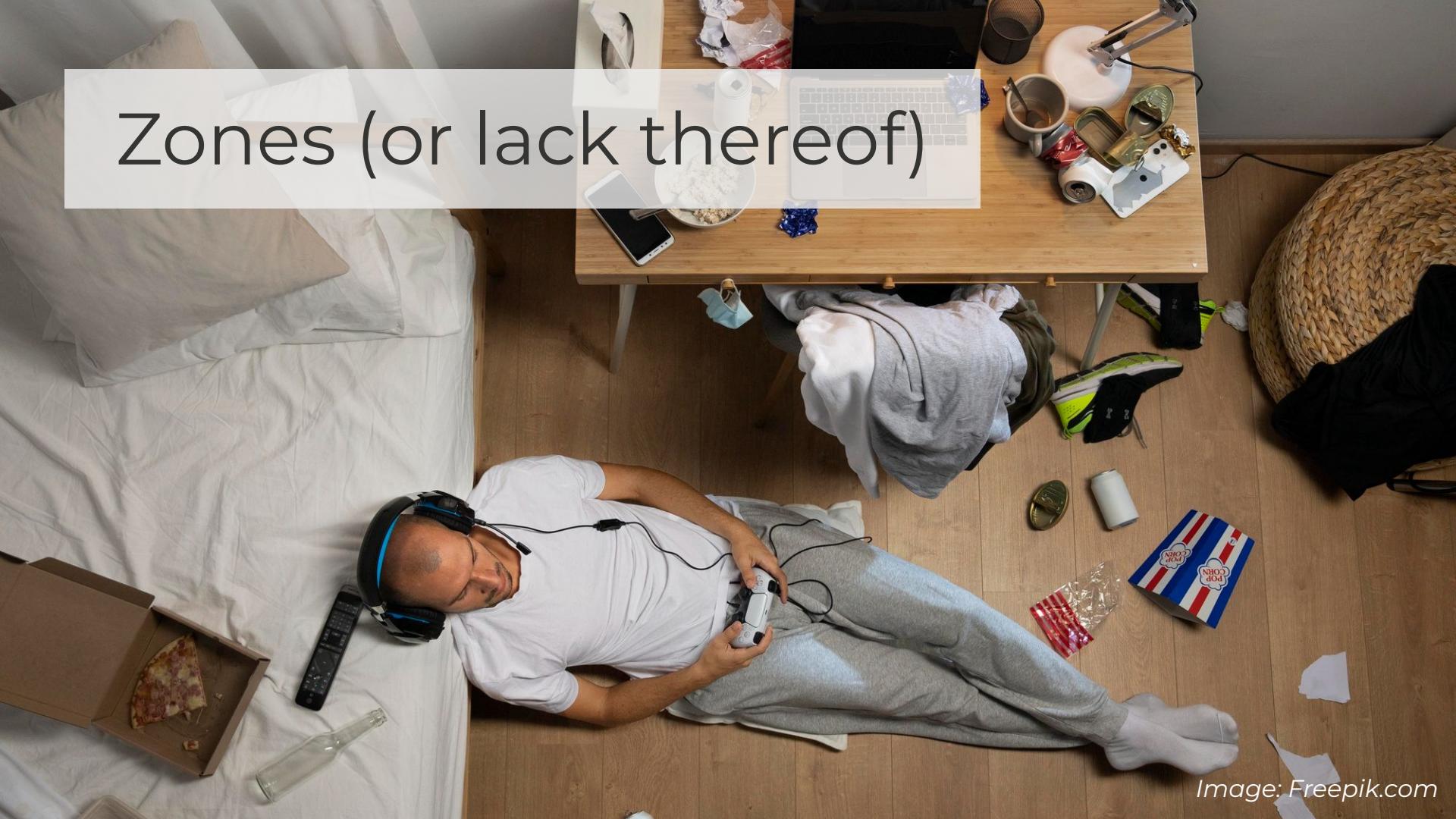


Image: Freepik.com



Images: IKEA

Documents

File Home Share View

Pin to Quick access Copy Paste Cut Copy path Paste shortcut Move to Copy to Delete Rename New folder New item Open New item Easy access Properties Select all Select none Invert selection

Clipboard Organize New Open Select

← → ↑ ↓ This PC Documents Search Documents

Quick access OneDrive - Personal This PC 3D Objects Desktop Documents Downloads Music Pictures Videos OS (C:) Network

boarding-pass.pdf CamScanner 09-05-2023 11.02 (...) Machine Learning Model Evaluation.Rmd Analysis.R.R Code123.R Data\_Analysis\_Work.R PythonScript\_Final\_Version.py Chart\_Data\_October.PNG Monthly\_Report\_August.pdf Project\_Report\_Very\_FINAL.docx Analysis\_Script\_Final\_Version.pdf DATA\_PRESENTATION.pdf

Meeting\_Agenda (June).txt Old\_Data\_Backup.csv Presentatio nDraft.V3.pptx DataCleaningScript-Old.py Untitled\_4.docx Code-Final-Final-Versi on.py experiment\_2\_results.cs v New Text Document (3).txt Script\_For\_Plottin g.R DataAnalys isSummary.docx Meeting\_Minutes (April 2020).txt Research\_Paper\_Outline.pdf

Scatterplot Data.jpeg monthly\_expenses.xls RESEARCH DATA SET.xlsx Important\_Info.txt Raw Data (April 2021).csv Presentatio n\_Final\_FIN AL.pptx DataCleaningScript-Updated.py Untitled\_Document\_2.doc python\_code\_sample\_fixed.py Project\_Pl a\_n\_Draft (Version 1).docx Experiment \_1\_Results.csv Meeting\_Notes (May 12).txt

ANALYSIS SCRIPT R FINAL V2.RChartData.png Financial\_Budget\_July.xlsx dataset-12345.csv Research\_Paper\_Draft (Updated 2021).txt New Text Document (2).txt New Text Document.txt PythonCodeForAnalysis.s.py ProjectPresentationSlides\_v2\_FINAL Important\_Document.docx Data\_Analysis\_Results -.pdf Default.rdp

128 items | 1 item selected 54.4 KB

# Self-contained projects



- Each project is a folder containing all files for a particular analytical endeavour
- Code assumes a fresh R session, with the project's root as the working directory
- Code still runs even when the folder is relocated

## New Project Wizard

### Create Project



#### New Directory

Start a project in a brand new working



#### Existing Directory

Associate a project with an existing w



#### Version Control

Checkout a project from a version co

## New Project Wizard

Back

### Project Type

>

#### New Project

#### R Package

#### Shiny Application

#### Quarto Project

#### Quarto Website

#### Quarto Blog

#### Quarto Book

## New Project Wizard

Back

### Create New Project



Directory name:

Create project as subdirectory of:

 ~ / Documents 

Create a git repository

Use renv with this project

Open in new session

Create Project

Cancel

File Edit Code View Plots Session Build Debug Profile Tools Help



Go to file/function



tutorial.qmd x helper-functions.R x

Render on Save ABC Render



Source Visual B I Normal



Normal



Format



Insert



Table



Outline



Environment



History



Connections



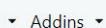
Git



Tutorial



File Edit Code View Plots Session Build Debug Profile Tools Help



Go to file/function



2023-09-18\_posit-conf-chicago

tutorial.qmd x helper-functions.R x

Render on Save ABC Render



```
title: "Tutorial"
format: html
editor: visual
---
```

## Quarto

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

(Top Level) ♦

Quarto ♦

Console Terminal x Background Jobs x

Terminal 1 MINGW64:/c/Users/reiko/Documents/2023-09-18\_posit-conf-chicago

(base)

reiko@LAPTOP-51130LKR MINGW64 ~/Documents/2023-09-18\_posit-conf-chicago (master)

\$

Environment History Connections Git Tutorial

Import 138 MiB List C

R Global Environment

Environment is empty

Files Plots Packages Help Viewer Presentation

.. .gitignore 44 B Sep 10

2023-09-18\_posit-conf-chicago.Rproj 218 B Sep 10

helper-functions.R 0 B Sep 10

tutorial.qmd 595 B Sep 10

2023-09-18\_posit-conf-chicago - RStudio

File Edit Code View Plots Session Build Debug Profile Tools Help

tutorial.qmd helper-functions.R

Render on Save Render Outline

Source Visual Normal Format Insert Table

```
title: "Tutorial"
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```

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(Top Level) Quarto

Console Terminal Background Jobs

Terminal 1 MINGW64:/c/Users/reiko/Documents/2023-09-18\_posit-conf-chicago  
(base) reiko@LAPTOP-51130LKR MINGW64 ~/Documents/2023-09-18\_posit-conf-chicago (master)  
\$

Environment History Connections Git Tutorial

Import 138 MiB List C

R Global Environment

Environment is empty

Files Plots Packages Help Viewer Presentation

Home Documents 2023-09-18\_posit-conf-chicago ...

Name	Size	Modified
..		Sep 10
.gitignore	44 B	Sep 10
2023-09-18_posit-conf-chicago.Rproj	218 B	Sep 10
helper-functions.R	0 B	Sep 10
tutorial.qmd	595 B	Sep 10

File Edit Code View Plots Session Build Debug Profile Tools Help



Addins ▾

tutorial.qmd x helper-functions.R x

Render on Save ABC Render



Format ▾ Insert ▾ Table ▾



Source Visual B I Normal ▾

Format ▾ Insert ▾ Table ▾

Outline

```
--  
title: "Tutorial"  
format: html  
editor: visual  
---
```

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Console Terminal x Background Jobs x

Terminal 1 MINGW64:/c/Users/reiko/Documents/2023-09-18\_posit-conf-chicago

(base)  
reiko@LAPTOP-51130LKR MINGW64 ~/Documents/2023-09-18\_posit-conf-chicago (master)  
\$

Environment is empty

Environment History Connections Git Tutorial

Import 138 MiB List C

R Global Environment

Files Plots Packages Help Viewer Presentation

Home Documents > 2023-09-18\_posit-conf-chicago

Name	Size	Modified
..		
.gitignore	44 B	Sep 10
2023-09-18_posit-conf-chicago.Rproj	218 B	Sep 10
helper-functions.R	0 B	Sep 10
tutorial.qmd	595 B	Sep 10

File Edit Code View Plots Session Build Debug Profile Tools Help



Go to file/function



Addins

tutorial.qmd x

helper-functions.R x



Source

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Normal

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Format

Insert

Table

Outline

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---
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(Top Level) ♦

Quarto ♦

Console Terminal x Background Jobs x

R 4.3.1 · ~/Documents/2023-09-18\_posit-conf-chicago/ ↗

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.

&gt; |



2023-09-18\_posit-conf-chicago

Environment

History

Connections

Git

Tutorial



R

Global Environment



Environment is empty

Files

Plots

Packages

Help

Viewer

Presentation



# Eliminating redundancy

# Without a system for tracking changes 😕

- Epiweek\_Summary.qmd
- Epiweek\_Summary\_Updates.qmd
- Epiweek\_Summary\_V2.qmd
- Epiweek\_Summary\_V2 - RO April 23 2023.qmd
- Epiweek\_Summary\_Final.qmd
- Epiweek\_Summary\_Final\_SUBMIT.qmd
- Epiweek\_Summary\_Final\_SUBMIT\_REVISED.qmd

# With version control 😊

- `Epiweek_Summary.qmd`
- `Epiweek_Summary_Updates.qmd`
- `Epiweek_Summary_V2.qmd`
- `Epiweek_Summary_V2 - RO April 23 2023.qmd`
- `Epiweek_Summary_Final.qmd`
- `Epiweek_Summary_Final_SUBMIT.qmd`
- `Epiweek_Summary_Final_SUBMIT REVISED.qmd`

# Storage solutions



*Image: Barn Images on Unsplash*



Images: IKEA

```
my-analysis/
├── data/
├── doc/
├── results/
├── src/
└── Makefile
└── README.md
```

```
my-package/
├── R/
├── data-raw/
├── data/
├── man/
├── tests/
└── vignettes/
└── NEWS.md
└── README.md
```

```
my-analysis/
├── data/
├── doc/
├── results/
├── src/
└── Makefile
└── README.md
```

```
my-package/
├── R/
├── data-raw/
├── data/
├── man/
├── tests/
├── vignettes/
└── NEWS.md
└── README.md
```

```
library(tidyverse)
library(quarto)

extract_metadata <- function(filename) {
  info <- quarto_inspect(filename)
  metadata <- info$formats$html$metadata
  output <- tibble(
    filename = filename,
    title = metadata$title,
    subtitle = metadata$subtitle,
  )
  return(output)
}
```

```
list.files() |>  
  str_subset(".qmd$") |>  
  map(extract_metadata) |>  
  list_rbind()
```

```
#> # A tibble: 4 × 3  
#>   filename    title      subtitle  
#>   <chr>       <chr>      <chr>  
#> 1 eda_01.qmd Heatmaps     Display a general  
vie...  
#> 2 eda_02.qmd Line plots   Show the evolution  
of...  
#> 3 eda_03.qmd Scatter plots Inspect the
```

# Visual consistency



*Image: Dinh Ng on Unsplash*



*Image: Freepik.com*

# Without a file naming convention 😞

- stuff.txt
- asdfghjk1!!!!!.R
- Doc1.docx
- random\_data.xlsx
- Presentation Sept. 19th (Reiko's Version).pptx

# With a file naming convention 😊

- 2023-09-04\_epi-week-36\_situation-report.qmd
- 2023-09-11\_epi-week-37\_situation-report.qmd
- 2023-09-18\_epi-week-38\_situation-report.qmd
- 2023-09-25\_epi-week-39\_situation-report.qmd
- 2023-10-02\_epi-week-40\_situation-report.qmd
- 01\_download-data.R
- 02\_clean-data.R
- 03\_generate-summary-stats-plots.R
- 04\_make-report.qmd

# With a file naming convention 😊

- 2023-09-04\_epi-week-36\_situation-report.qmd
- 2023-09-11\_epi-week-37\_situation-report.qmd
- 2023-09-18\_epi-week-38\_situation-report.qmd
- 2023-09-25\_epi-week-39\_situation-report.qmd
- 2023-10-02\_epi-week-40\_situation-report.qmd
- 01\_download-data.R
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- 2023-09-18\_epi-week-38\_situation-report.qmd
- 2023-09-25\_epi-week-39\_situation-report.qmd
- 2023-10-02\_epi-week-40\_situation-report.qmd
- 01\_download-data.R
- 02\_clean-data.R
- 03\_generate-summary-stats-plots.R
- 04\_make-report.qmd

# **Home organization ideas are helpful in creating a serene workspace that:**

- Facilitates reproducible analysis
- Is inviting to other collaborators (including your future self)
- Exudes professionalism