# Some more R, Git, and R Markdown and Quarto tips

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# Overview

- Some more R Markdown and Quarto tips
  - Seven tips for making Quarto revealjs presentations
  - Creating R Markdown and Quarto tutorial documents
  - Creating multilanguage Quarto documents (i.e., R and Stata executed code in same doc)
- Some more R tips
  - Creating a reproducible environment in R without using renv CRAN snapshot repositories for the win
- Some more Git, GitHub Desktop (and Lazygit), and GitHub tips
  - Making suggestions on a GitHub PR
  - Amending a previous commit message in GitHub Desktop
  - Amending a previous commit in GitHub Desktop
  - Amending previous commits and commits messages in Lazygit interactive rebase made "easy"

# Some more R Markdown and Quarto tips

## Seven tips for making Quarto presentations

- Quarto revealjs docs <u>https://quarto.org/docs/presentations/revealjs/</u>
- <u>https://remlapmot.github.io/post/2025/quarto-revealjs-tips/</u>

# Creating R Markdown and Quarto tutorial documents

- R Markdown:
- Quarto: <u>https://remlapmot.github.io/post/2025/quarto-conditional-content/</u>

# Creating multilanguage Quarto documents

- Technically Quarto documents may only have 1 engine
- Workaround: use {{< embed >}} shortcode to include chunks and output from documents using other engines
- <u>https://remlapmot.github.io/post/2025/multi-engine-quarto/</u>
- Setting up the nbstata Jupyter kernel in a uv venv
  - uv docs (including installation instructions) <u>https://docs.astral.sh/uv/</u>

# Some more R tips

# Reproducible R environments using CRAN snapshot repos without using renv/pak/pacman

- (Without using renv or similar)
- Simply note the date at the top of your script in a comment
- Then run update.packages()
- (Assume using current version of R)
- Then if you need to recreate this environment use a snapshot from <a href="https://packagemanager.posit.co/client/#/repos/cran/setup">https://packagemanager.posit.co/client/#/repos/cran/setup</a>
- Nb. RSPM = PPPM = P3M

÷	÷	C	۵	e	packagemanager.posit.co/client/#/repos/cran/setup?distribution=windows&snapshot=2025-03-20						
	×	pos	<b>it</b> Pa	icka	ge Manager	Repository: cran	~	Q Packages in the cran repository			

#### Set up your environment to install R packages from cran

Select from the following options, then follow the customized instructions below to complete your setup.

Operating System: what system are you using the packages on?

- macOS
   Windows
   Linux
- U Linux

#### Windows

Package Manager compatible with V optionally selecte

Snapshots: do you want to freeze package versions to enhance reproducibility?

No, install the most recent packages available

Yes, always install packages from the date I choose

025				February 2025						March 2025										
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The URL below encodes the following snapshot references:

cran [Last update: Mar 20, 2025 12:00 AM UTC]

#### Environment: where are you using R?

- RStudio IDE
- O Posit Workbench
- O Posit Connect
- O Some other R outside of RStudio IDE

#### **Repository URL:**

https://packanemananer.pocit.co/cran/2025_03_20	600
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#### Frozen to March

Package Manager as of March 20, 20

Freezing to a spec when re-installing always match, or from a previous p

**RStudio IDE** 

Get more info on

#### **Repository URL**

Use this URL to in Manager directly.

- install.packages(c("package1", "package2"), repos = "<u>https://packagemanager.posit.co/cran/2025-03-20</u>")
- Snapshots created at midnight so you might need tomorrow's date
- The Public Posit Package Manager now only CRAN snapshotting service (used to be MRAN as well)
- Many companies advocated this approach: RevolutionR, Cynkra (e.g., <u>https://github.com/cynkra/cynkrathis</u>)
- Can be used within renv

### cynkra RSPM snapshots

cynkra makes use of certain RStudio Package Manager (RSPM) snapshots across projects. Usually each R Version is tied to a snapshot near it's release date. If a snapshot is considered unstable due to certain R package version clashes, additional snapshots for specific R versions can be listed.

- For a GitHub only package you can record the most recent commit and then include its installation as: remotes::install\_github('MRCIEU/TwoSampleMR@6268c2c')
- Or use date to go through commit history later to find SHA
  - https://github.com/MRCIEU/TwoSampleMR/commits/
- Or you could save a copy of the repo or fork the repo on the day you installed it
- Only works for simple examples as you need to know SHA of any hard (and soft) GitHub only dependency packages you used
- Or you can download the package from an r-universe see apis page
  - https://mrcieu.r-universe.dev/apis

	Downlo	ad snapshot	
https://mrcieu.r-universe.c	lev/api/snapshot/zip		Download
Download a full copy of the cran-lik	ie repository with docs, to mirror or ba	ickup.	and the second s
Optional filters (defaults	Source packages	Binaries for R-4.5	alspac
include everything):	Windows binaries	Binaries for R-4.4	BESIDEMR
	MacOS binaries	Binaries for R-4.3	bpbounds
	Linux binaries	CAMeRa	
	WebAssembly binaries	cause	
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# Some more Git, GitHub Desktop (and Lazygit), and GitHub tips

# Making suggestions on a GitHub PR

Click + on LHS for a line (or Shift click for several lines)

Then button third right in popup is Add a suggestion; and has Markdown syntax

```suggestion

• • •

#### 120 +

- 121 + As with all things OpenSAFELY, this work was done out in public you can see more of the technical details
- 122 + in the [GitHub repository for the OpenSAFELY R image]
   (https://github.com/opensafely-core/r-docker).

#### 123 +

124 + This is much stronger technical foundation for our R support from now on. It will make it far easier for us to maintain, and to respond to R user needs, and also to release future new versions of the image with the latest versions of R - perhaps slightly more often than every 4.5 years.



# Amending previous commit message in GitHub Desktop

• <u>https://remlapmot.github.io/post/2025/amend-commit-messages/</u>

# Interactive rebase made "easy" in Lazygit

- My Git levels of attainment
  - Beginner: branches, push and pull between local and GitHub, make PR
  - Medium: squash, reorder, resolve merge conflicts, stash, worktrees
  - Advanced: interactive rebase
- Interactive rebase at the command line is very very hard (see next slide) <u>https://opensource.com/article/20/3/lazygit</u>
- Lazygit installation instructions: <u>https://github.com/jesseduffield/lazygit?tab=readme-ov-file#installation</u>
- Launch by running lazygit in Terminal

## Interactive rebase at the command line is hard (don't do it)

The user experience of an interactive rebase on the Git command line is a horror story that belongs in a Stephen King novel. To do something as simple as amending an old commit requires following these steps (do not let your kids read this without parental guidance):

- 1. Stash the changes you want to apply with **git stash**.
- 2. Copy the SHA of the commit you want to amend.
- 3. Begin the rebase with git rebase --interactive <commit-SHA>^.
- 4. (This is where the screams start...) A TODO file opens in Vim, where you'll need to find your commit and replace **pick** on the line with **edit**.
- 5. Save the file.
- 6. Unstash your changes with **git stash pop**.
- 7. Amend the commit with git commit --amend.
- 8. Continue the rebase with **git rebase --continue**.

Just thinking back to the days of CLI terror gives me heart palpitations.

# Lazygit in action

|                                                                                                                                                                                                                                                                                                                                                                                             | 🛅 lazygit                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                    |                                                                                           |
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| -/Downloads                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                    | lazygit                                                                                                                                                                                                                                                            | ¥2 +                                                                                      |
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# Rewording and editing commits in Lazygit

- To edit previous commit messages in Lazygit
  - Navigate to Reflog
  - r Reword to edit previous commit message
  - Move to message box (<Tab>), alt + <Enter> to commit
- To edit previous commits in Lazygit
  - Move to Reflog [4]
  - Move to commit want to edit
  - e Edit to edit previous commit
  - Press <Enter> on commit want to edit
  - o e Edit
  - Pops you into vim make edits then save and quit :wq
  - Move back to top left Files pane
  - Space stage changed file/s
  - Now continue rebase m rebase options <Enter> or c continue
  - Move to Commit pane Escape and should see edited commit
  - Now probably want to edit commit message of edited commit Move to Reflog r Reword commit message of squashed commit

# Summary

- Slightly random collection of R, Quarto, and Git tips
- I hope something was interesting/useful