Workflows for Reproducible Research with R & Git

Build your own Binder

Exercise

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Exercise: create Repository

1. Create a git repository for the analysis
   `exercises/demo_script.R`

2. Push the repository to GitHub

Exercise: enable the R environment

1. Add a runtime.txt to your repository following the convention
   `R-version-YYYY-MM-DD`

use https://github.com/arnim/ggplot2Demo as a template.

2. Launch your repository
   a. Go to https://mybinder.org
   b. Type the URL of your repo into the URL-box.
   c. As you type, the webpage generates a link you may share with others

If everything worked… you'll see a JupyterLab interface

What is missing?

Exercise: add dependencies

1. Add a install.R to your repository and use https://github.com/binder-examples/r as a template. The file should trigger the installations of packages.
2. Add data and other needed files to your repository
3. Add the share link to your readme.md

Exercise: explore the Binderverse

1. https://github.com/binder-examples
2. https://archive.analytics.mybinder.org
3. Explore the use of Zenodo or Dataverse via MyBinder
4. Explore Python, Julia or latex via MyBinder

Special thanks to the BinderHub Community

https://github.com/jupyterhub/binderhub/graphs/contributors

and many more who aren't in the GitHub history.

Special thanks to **Tim Head** & **The Turing Way**

for pioneering and sharing training resources

https://build-a-binder.github.io/

https://github.com/alan-turing-institute/the-turing-way/tree/main/workshops

How to **binderize your repository**?

Documentation of the repo2docker Configuration Files
https://repo2docker.readthedocs.io/en/latest/config_files.html

Discourse Jupyter https://discourse.jupyter.org/

Binder Examples https://github.com/binder-examples
https://github.com/binder-examples/r

Exercise Solution => To be announced