

Tools and Workflows for Reproducible Research in the Quantitative Social Sciences

Jupyter Notebooks & Binder **Exercise**

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November 18th, 2022

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/binder-examples/r> as a template.

1. 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 use <https://github.com/binder-examples/r> as a template. The file should trigger the installation of *tidyverse*, *rmarkdown*, *corrr*, *stargazer*, *tinytex*, and *equationomatic*.
2. Add `data/*` to your repository
3. Add the share link to your `readme.md`

Exercise: convert Rmd to Jupyter

1. Enable Jupyter via a requirements.txt file in your repository use <https://github.com/mwouts/jupyter> as a template. Hint: have a look at the binder/postBuild in the jupyter GH repository.
2. Open your *.Rmd file as Notebook

Exercise: explore the Binderverse

1. <https://github.com/binder-examples>
2. <https://binderlytics.herokuapp.com/binder-launches/binder>
3. <https://notebooks.gesis.org/gallery>
4. <https://archive.analytics.mybinder.org>
5. Explore the use of Zenodo or Dataverse via MyBinder
6. Explore Python, Julia or latex via MyBinder
7. ... or import a repository persistently
<https://notebooks.gesis.org>

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>

Example R and Python repositories to get started

R https://github.com/gesiscss/iris_r

Python https://github.com/gesiscss/iris_python

Our WS demo repository <https://github.com/jobreu/demo-repo>