

Binderhub exercises

For this exercise you will need a Github account. Sign-up via <https://github.com/>.

In exercises 1 to 4 you are going to upload a Jupyter notebook to Github and share it via Binderhub.

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Exercise 1:

First create the Github repo and insert a notebook file.

Task:

- Create a Github repo. You can use any repo name you choose. If you cannot decide a suggestion is 'binder_exercise'
- Make a local copy of the notebook that contains the solutions to ED data wrangling exercise.
- Push the notebook to the repo.

Hints

- If you do not know how to use GitHub you can create the repository and then click on the green **upload** button. This will allow you to select the notebook and add a commit message.
- If you prefer to do this via git then I recommend creating the remote repo first, cloning locally, add (and stage), commit the notebook. Finally push using `git push`. Depending on your authentication method you may be asked for your GitHub username and password.

Exercise 2:

You now need to create a conda environment file so that binderhub knows what version of python and data science packages to install.

Task:

- Create a directory in the repo called 'binder'
- Create a conda environment file in `binder/environment.yml` with the appropriate libraries. A suggestion is:

```
name: binder_ex
channels:
  - defaults
  - conda-forge
dependencies:
  - matplotlib=3.4.2
  - numpy=1.20.3
  - pandas=1.3.1
  - python=3.8.8
```

- Commit the changes and push to github using your preferred method.

Exercise 3:

You are now ready to share your notebook via binder

Task

- Copy the URL of your GitHub repo's main page.
- Using your browser navigate to <https://mybinder.org>
- Paste the URL of your Github repo and click on 'launch' (the build will take several minutes)

Exercise 4:

Let's add a 'launch binder badge' to a `README.md` file in your repo

Let's add a launch binder badge to a `README.md` file in your repo.

Task:

- From the BinderHub setup page copy the markdown text that you will use to create the badge.
- If required (i.e. you don't already have one). Create a `README.md` file and add it to your GitHub repo.
- Open `README.md` for editing. At the top paste in the copied launch binderhub markdown.
- Push the update to your GitHub repo.
- Navigate to your GitHub repo and click on the badge to launch binderhub!

Exercise 5:

Task

- Use BinderHub to share the more advanced `ts_emergency` package you created in the exercises.

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