Instructions for Authors

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Introduction

As part of the submission we require authors to submit a *code capsule* on Code Ocean. A code capsule is a piece of software that contains the code, data, and software specification required to reproduce the results in the paper. Once published, your paper, code, and data will get their own DOIs and be accessible to readers of IJDS.

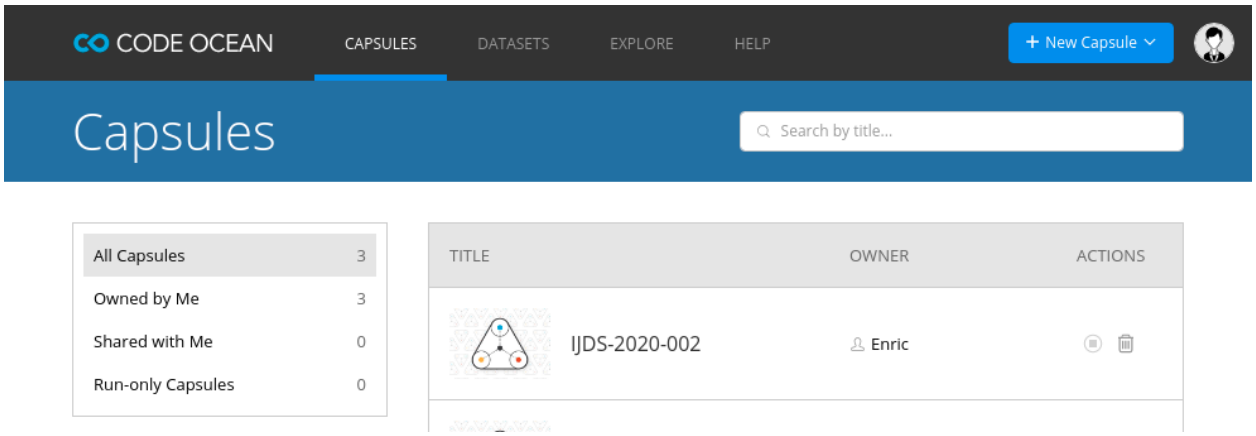
The submission process for authors is as follows:

1. Submit your data + code on Code Ocean (see next section).
2. Submit your paper on Scholar One.

Submitting a code capsule

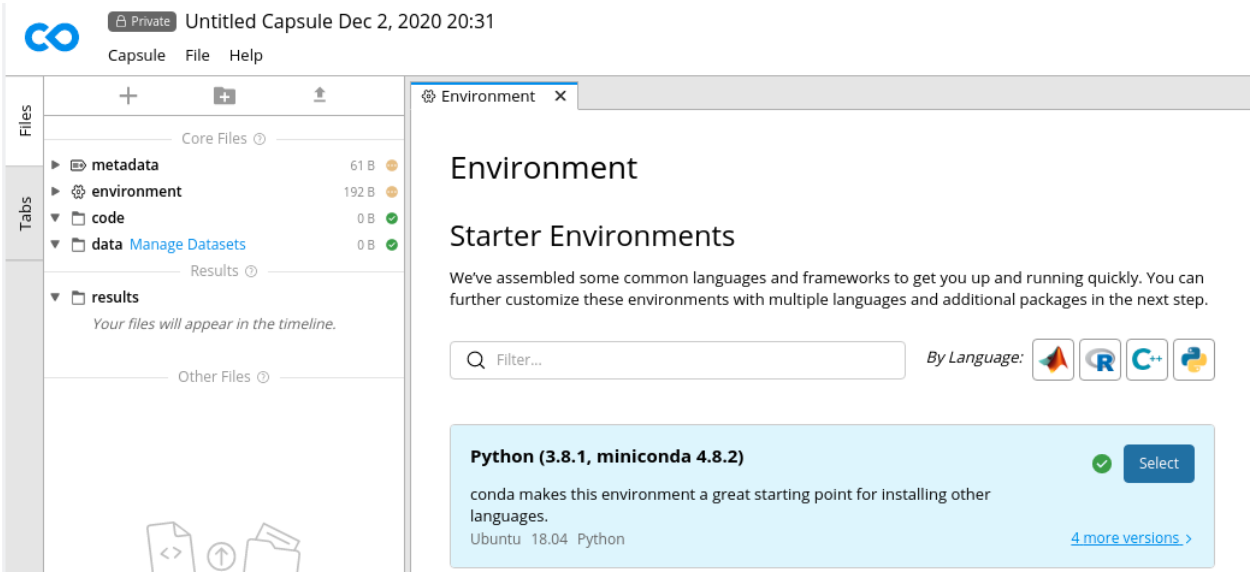
Creating a capsule

First of all, you will need to create a Code Ocean account here. Once you are logged into your account, go to the capsules section and press the blue “+ New Capsule” button in the top right corner.

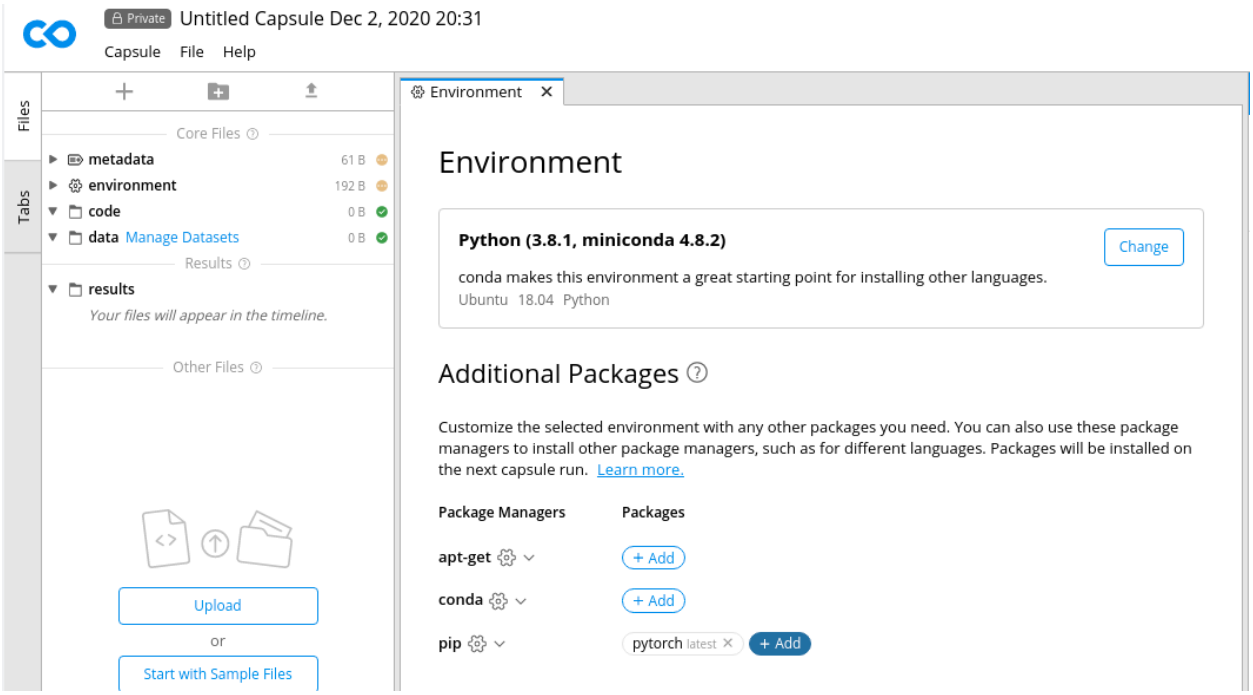


You will be presented with your blank “code capsule” and Code Ocean will ask you to configure it. To do so you will need to do two things:

1. Select a “base environment” which comes with basic language tools (like R and python). You can also use a blank Ubuntu machine to start from scratch and install tools as needed (see FAQ). We select the default python for our example:



2. Select additional packages to install. For our example we use the pytorch deep learning library and opt to install it via “pip”, python’s package manager.



You can come back to this step at any point in time by selecting “Environment” on the left tabbed pane and pressing the “Use Environment Editor” button.

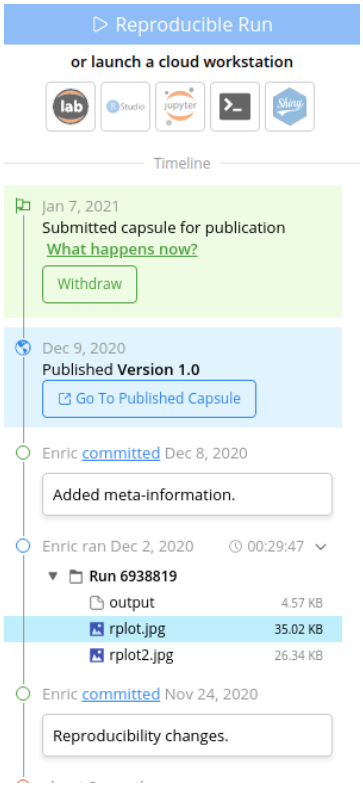
Now that your capsule is set-up, all that remains is to place your code inside of the capsule. Upload files using the “Upload” button in the left pane and run them using the blue “Reproducible Run” button in the top right corner.

To ensure that your code runs properly, you will need to follow the Code Ocean file structure. Specifically, you should place files in the following folders:

- **code:** contains all your code
- **data**: contains all your data, this folder is accessible in your code via the “/data” path in your code.
- **results:** contains all your figures, tables, and other results from your code. You can access it via the “/results” path in your code.

Once you are confident that you have everything set-up you can try running the capsule by pressing the “Reproducible Run” button. This will by default run on an Amazon AWS r5d.4xlarge machine with 16-cores and 120 GB of memory.

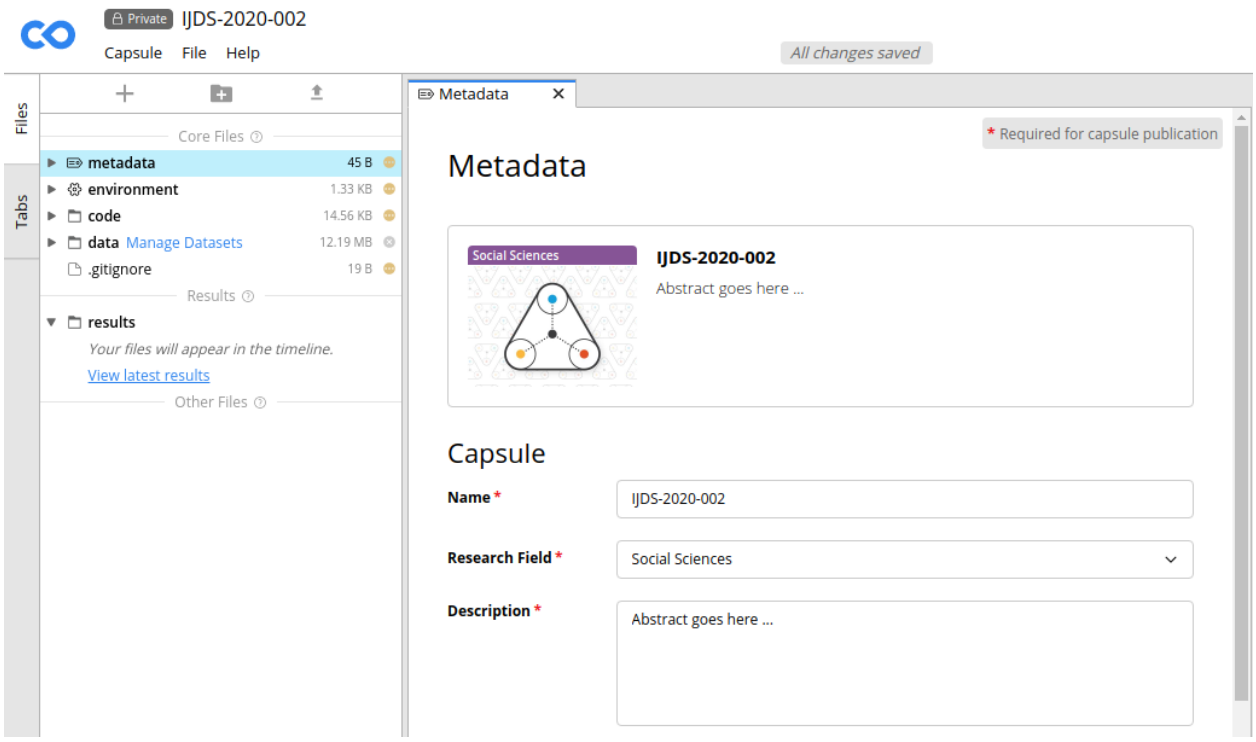
Note that due to reproducibility reasons, the results directory is not a “real” directory. If you want to see the output of a specific run, you should press on the “results” section of your timeline after you’ve completed your run as is shown below:



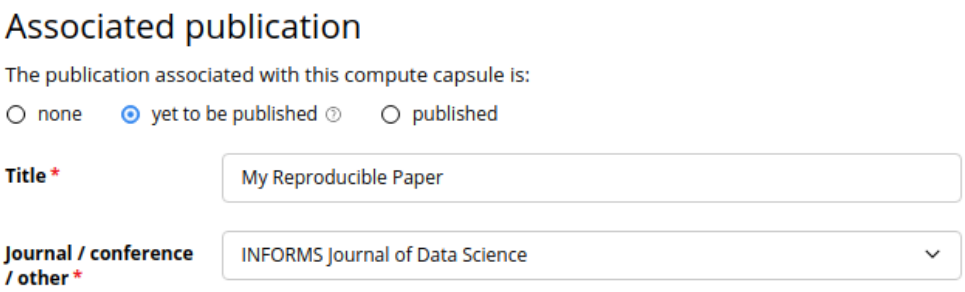
Typically you will want to produce graphics as image files and write tables to text files.

Submitting a capsule

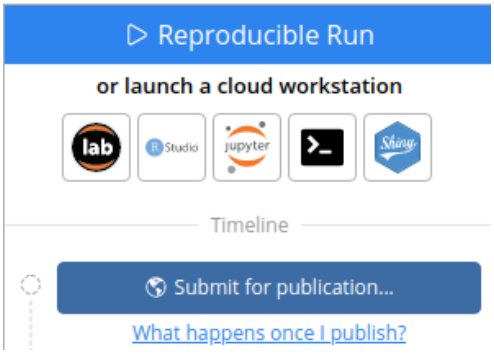
Once your code capsule runs without errors you can proceed to submitting the capsule to IJDS. To do so, first fill in all the required metadata in the metadata section:



Under the “Associated Publication” section of the Metadata you should use the following settings:



Double check that you set the status to “*yet to be published*”, and not “published”. All that is left is to submit the capsule by pressing the “Submit for publication” button:



After pressing this button two things will happen:

1. Your code capsule will be checked by Code Ocean to ensure that it runs properly.
2. Your code capsule will automatically be submitted to IJDS for further handling.

The capsule will be sent to the reviewers who can now easily inspect your code. Once your manuscript has been accepted, we will ask that you set the status to “published”. By doing so, you will make the capsule public.

FAQ

Where is the output? Why is the “results” folder empty?

CodeOcean does not write output to the results folder. Instead, every time someone runs the code, it creates a copy of the output into a separate folder behind the scenes. You can access the output as explained in the “Running the Code / Viewing Output” section of this document.

Which programming languages does Code Ocean support?

C/C++, Fortran, Java, Julia, Lua, MATLAB, Python, R, Stata

If you are using an open-source programming language that is not listed above, please check these instructions on how to install it into your capsule. You can also write to Code Ocean support directly at support@codeocean.com.

Restrictions apply to my data, can I just submit the code instead?

We ask that you submit at least a minimum viable product, meaning a collection of code that is runnable and inspectable by reviewers. For instance, if you cannot submit your data due to license restrictions, you should create a representative sample / synthetic dataset that allows the reviewers to run the code as is. Please refer to the Data and Code Disclosure Policy for more details.

What should I do if my software package is not supported by Code Ocean?

Please submit your code in the same format by uploading it on github and providing your github link at the time of submission. Make sure to specify the software version for every component that is necessary to run the code (including libraries). IJDS will make a stale copy of your github folder at the time of publication.

What does the “run” file do?

The run file is an internal file that Code Ocean uses to determine what to run when you press the “Reproducible Run” button. For instance, it could specify to run R on a specified file, or to open and run a prespecified python file.

My dataset is too large to be uploaded on Code Ocean, what should i do?

Large data files can be uploaded using your favorite cloud storage service, but will eventually be indexed and uploaded to Zenodo.

I have another question

For technical questions related to your capsule we recommend that you reach out to Code Ocean directly (support@codeocean.com). Please don't hesitate to reach out to our Reproducibility Editor (enric.junquedefortuny@nyu.edu) if you need assistance or have any comments or suggestions or if you require assistance related to IJDS specifically. You are also welcome to comment in this google doc directly.