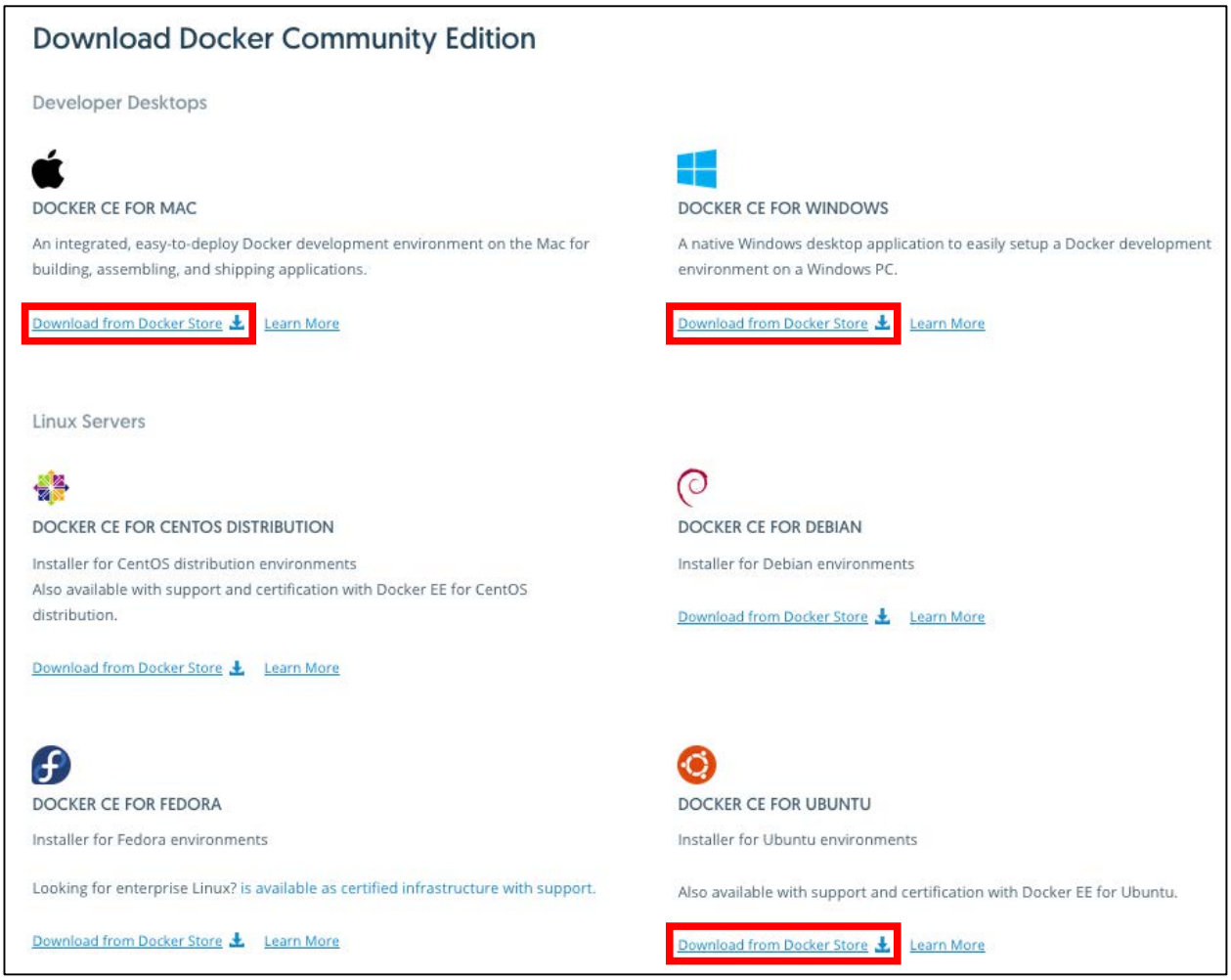
LittleBrain manual

1. To download Docker, go to: https://www.docker.com/community-edition and scroll down until you see these options. Download the Docker version that is compatible with your operating system (e.g. windows, mac):



2. Once the program "Docker" is installed, start the program "Docker" in your computer. Then open the terminal of your computer (mac: look for "Terminal"; windows: look for "Command Prompt"). Type the following in your terminal in order to download the LittleBrain docker container (this will use approximately 2.5GB of space):

If using mac or linux, type this:
docker pull xaviergp/littlebrain_v2

If using windows, type this:
docker.exe pull xaviergp/littlebrain_v2

3. To start LittleBrain, follow these steps:

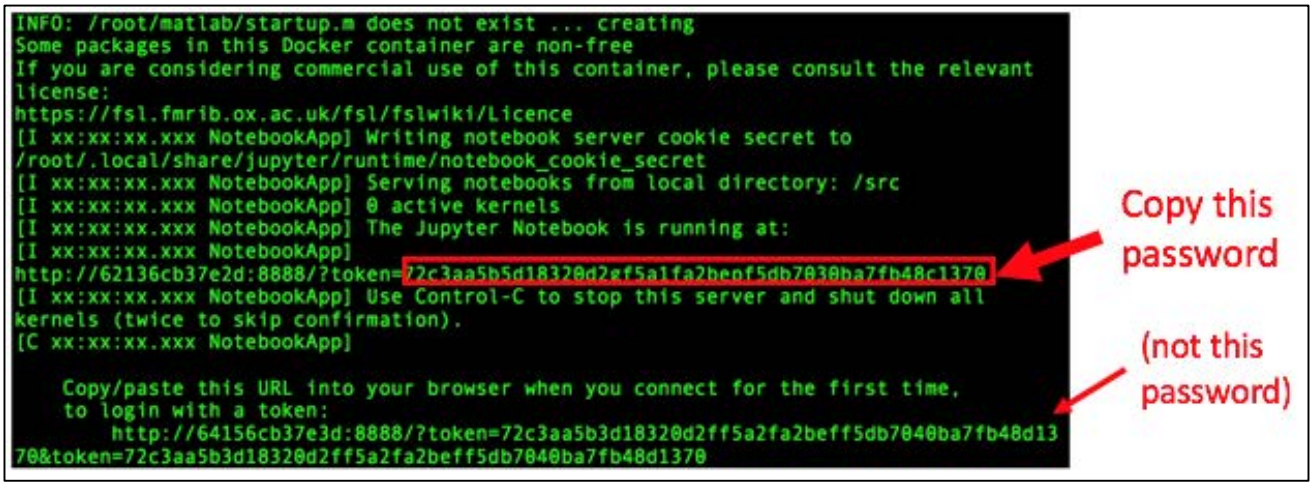
3.1 - Start the program "Docker" in your computer.

3.2 - When Docker is running (it may take a while for Docker to start running), open the terminal of your computer (mac or linux: look for "Terminal"; windows: look for "Command Prompt"). Then type the following in your terminal:

If using mac or linux, type this in the terminal:
docker run --rm -p 8888:8888 xaviergp/littlebrain_v2

If using windows, type this in the terminal:
docker.exe run --rm -p 8888:8888 xaviergp/littlebrain_v2

3.3 - Copy the password that has been generated after the word "token" shown in your terminal (shown in red in the image below).

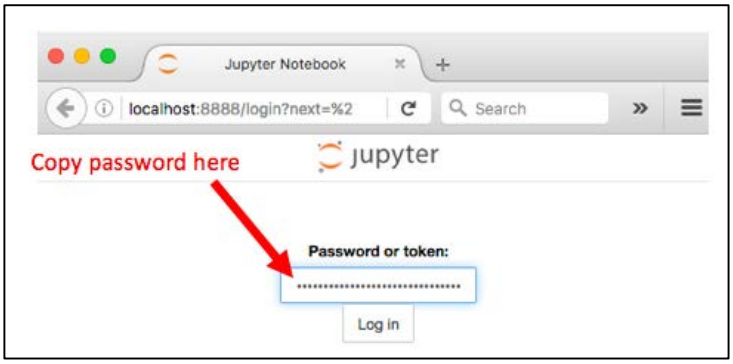


If an error occurs, re-start Docker and repeat step 3 (this will solve the issue if port 8888 is being used by a previously opened jupyter notebook).

3.4 - Open your internet browser (for example, firefox), type the address "localhost:8888", and copy the password in the text box that will appear:

A

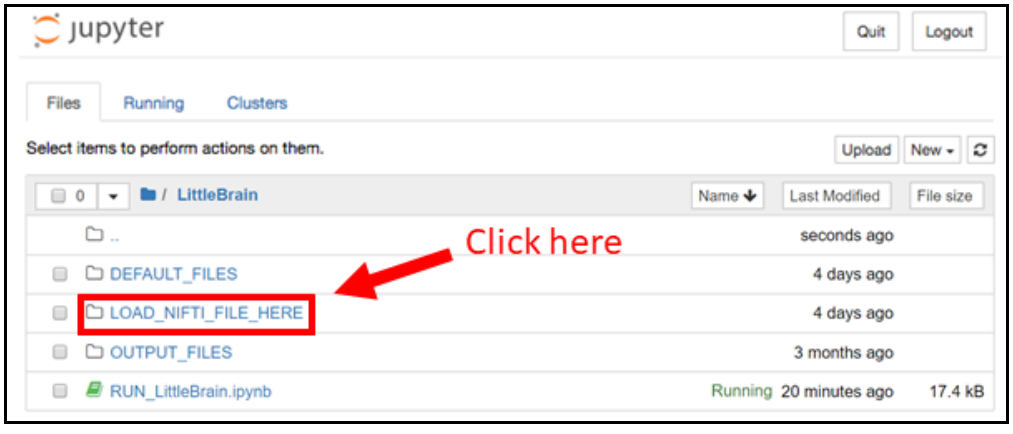
B



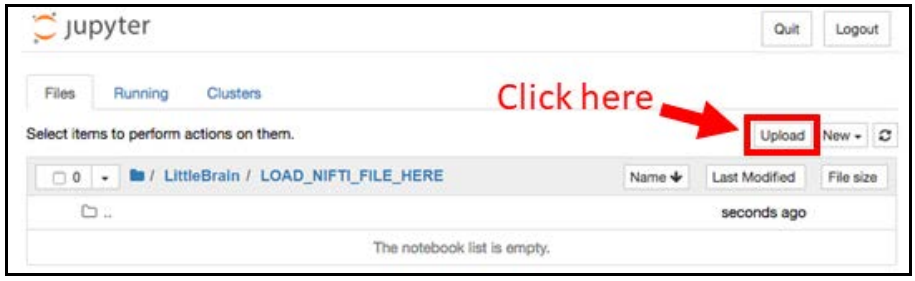
4. To upload the clusters that you want to map, go to "LittleBrain", then go to "LOAD_NIFTI_FILE_HERE", and then click "Upload".

A

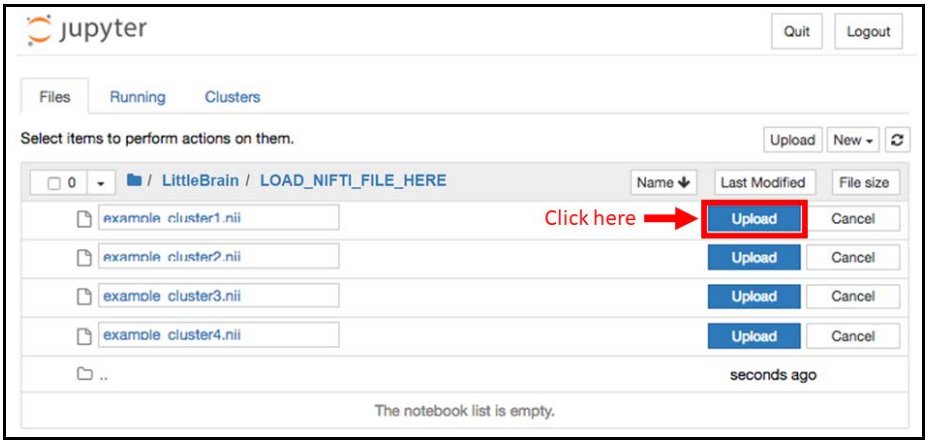
B



C

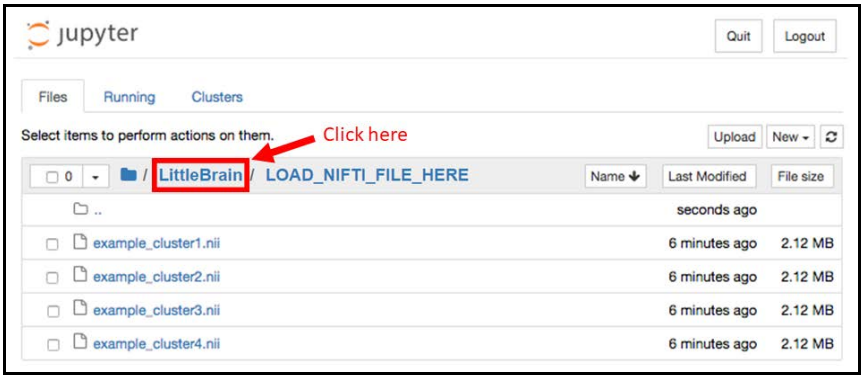


D



5. To start LittleBrain, go back to the "LittleBrain" folder and click "RUN_LittleBrain"

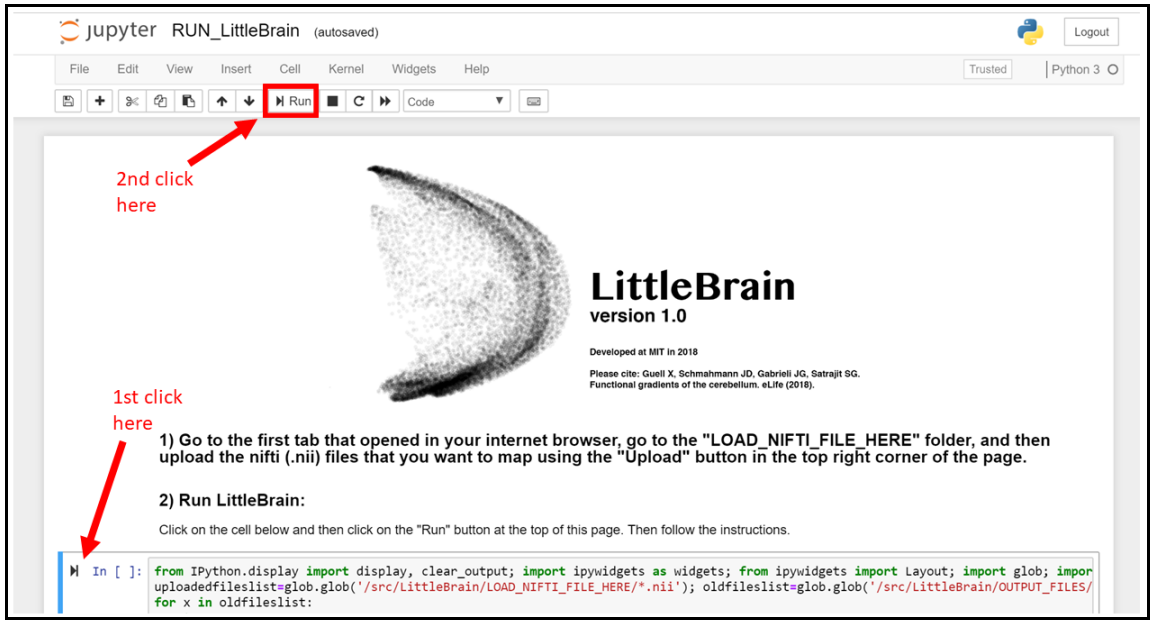
A



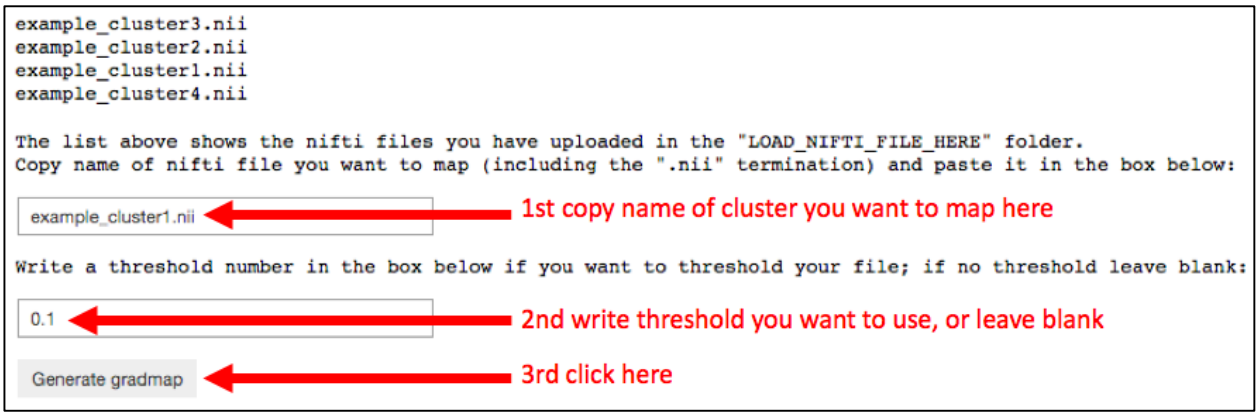
B

6. Follow the instructions that will appear in the screen.

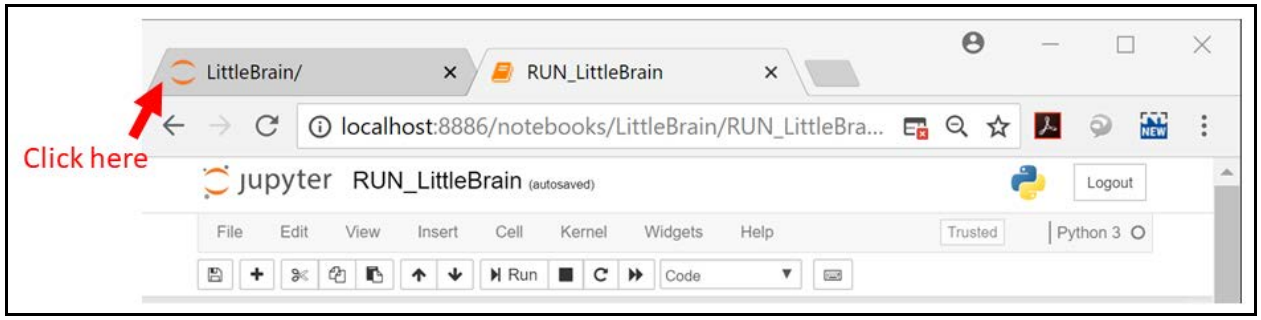
A



B

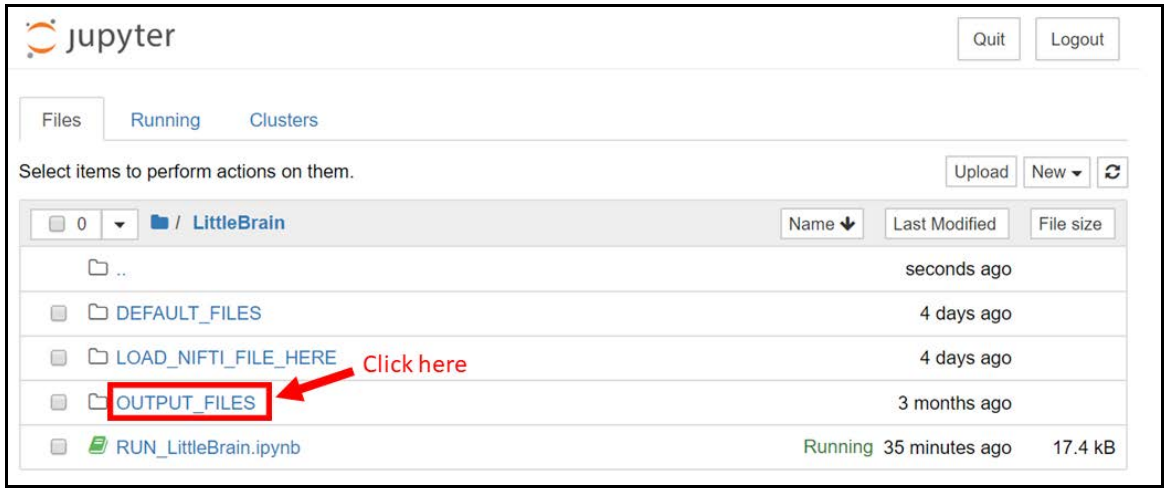


7. To download the scatterplot, go to the other tab that was opened in your browser:

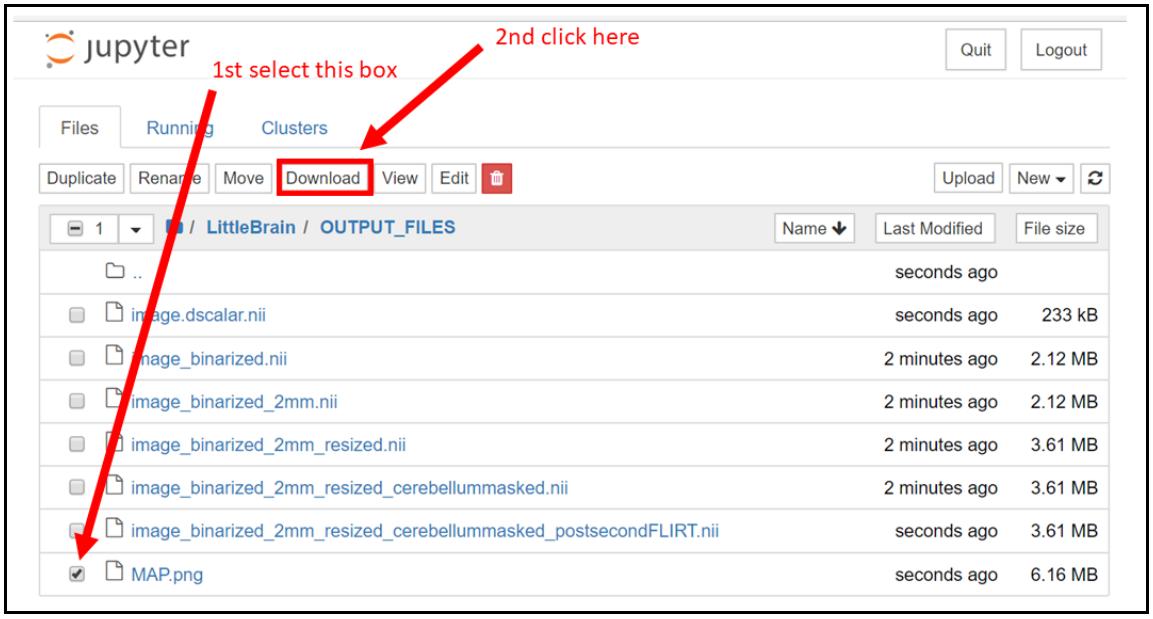


8. Go to the "OUTPUT_FILES" folder, and download "MAP.png":

A



B



9. Additional options include:

- **Check transformations (cerebellar masking, 2mm resolution change) that have occurred to the uploaded cerebellar data. This can be visualized by clicking the button "check transformations" after a map is generated.**
- **Generate non-binary maps. These can be generated by clicking the button "see nonbinary map" after a map is generated.**
- **Download Gradient 1 and Gradient 2 values for the clusters that have been mapped. These values can be downloaded from the "OUTPUT_FILES" folder as "GRADIENT1_values.csv" and "GRADIENT2_values.csv".**