Using Gigantum

Gigantum is a data science platform that

- Runs in a Docker container

- Organizes things according to "Projects"
  - Independent and configurable environments
  - Tracks history of who did what and when

- Allows work in Python or R
  - Python: Jupyter or JupyterLab
  - R: RStudio

- Automates versioning and containerization
  - Projects are portable and can be shared
  - Everything done in a Project is easily reproducible

What will we do today?

- Download a zipped Gigantum Project that has the demo already installed
- Go to a cloud hosted Gigantum instance, make an account, and log in
- Import the zipped Project into your account
  - The project has demo notebooks
- Use those notebooks to explore
- Use your own data (or other data) to play
- Publish the Project to use it later if you like

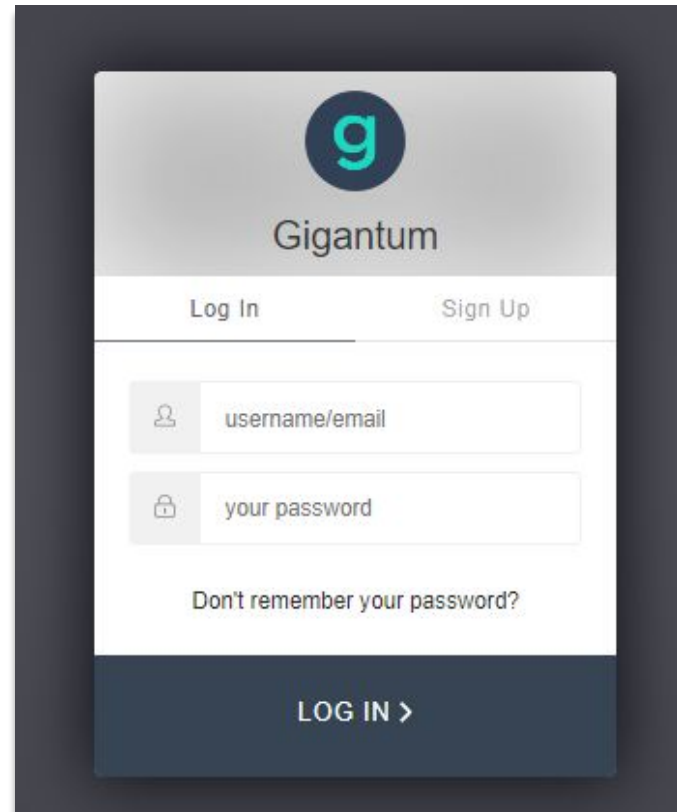# Using Gigantum: Creating an account

Use **Chrome** or **Firefox** and go to
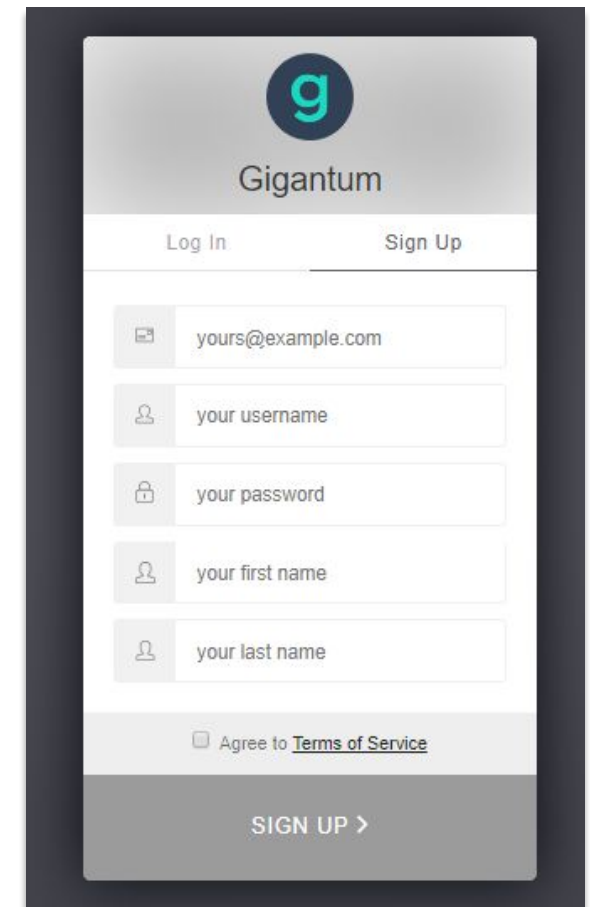
https://neurodata.gigantumdemo.com/

At the Log In widget

Click Sign Up

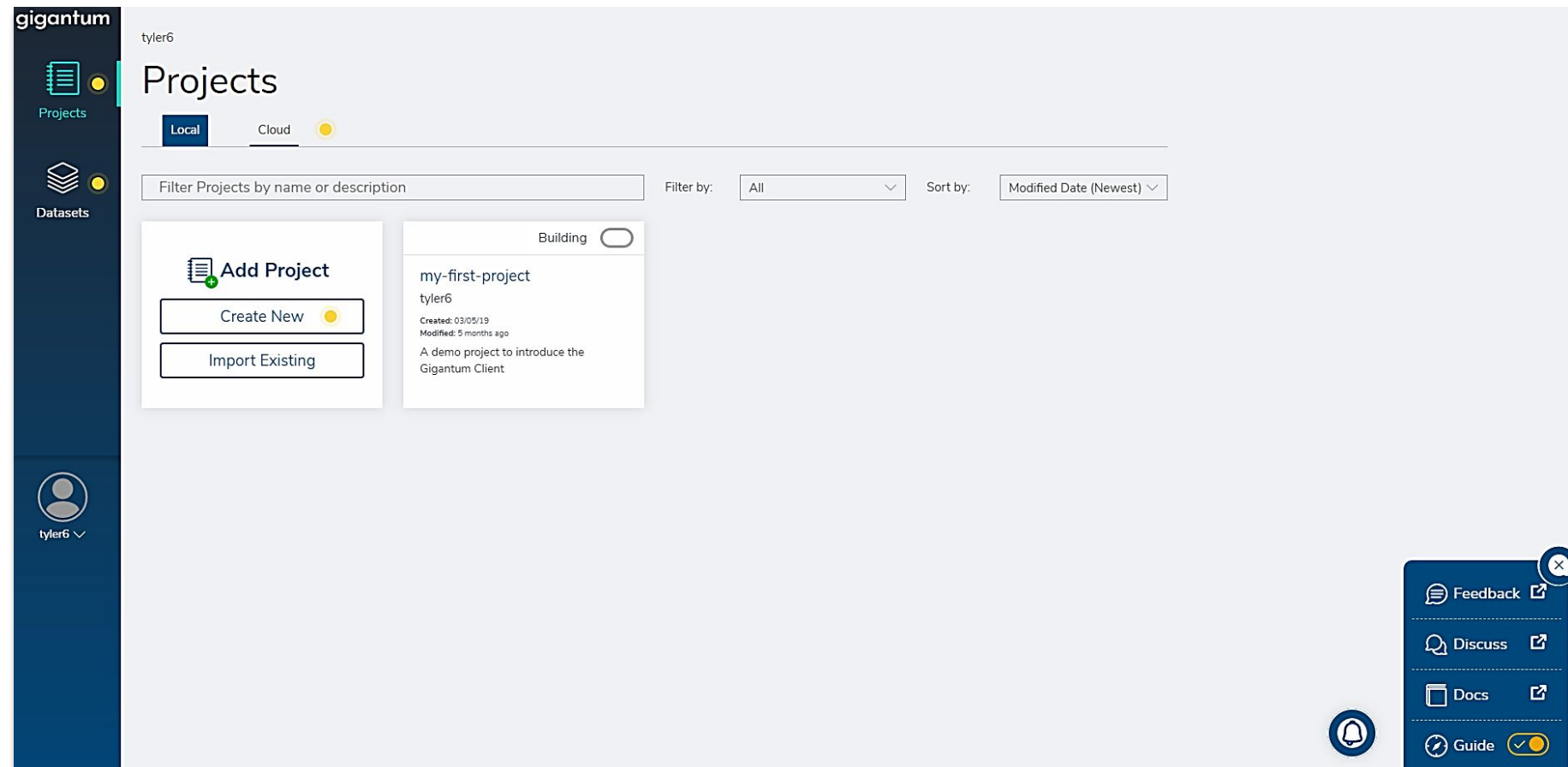Enter your details, agree to the terms and click SIGN UP

Using Gigantum: Overview page

This page let's you see the Projects you have locally.

You can create a Project or import an existing one.

Yellow dots give hints on mouse over.

You can turn it off with the "Guide" toggle in the corner.

Using Gigantum: Importing a zipped Project

Click Import Existing to bring up the import card.

Drag the zipped downloaded Project onto the import card.

The Project will build and open to the Project Overview Page

Using Gigantum: The Project Overview

After import, the app opens to the Project overview page

There are tabs for code files, input data, and output data.

Look in the Code tab. You will see some notebooks.

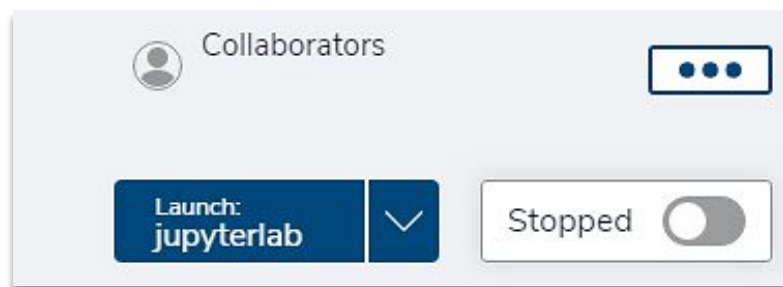Look in the Input Data tab. You will see some files and folders.

Look in the Environment tab. You will see the installed packages.

Using Gigantum: Starting & stopping Jupyter

To start computing

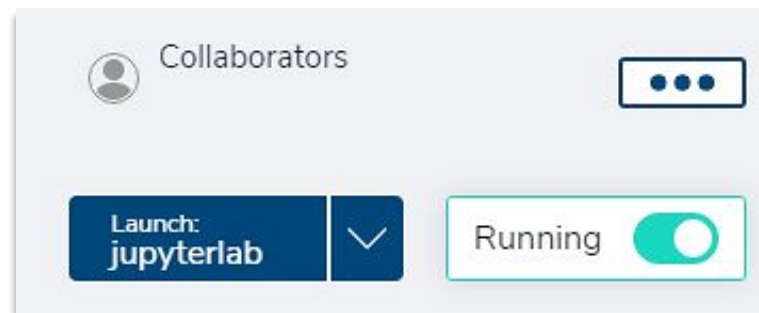Click the "Launch: jupyterlab" button

If a tab doesn't launch, then fix your popup blocker so the app can launch a tab.

Once you fix the popup blocker, stop the environment & then re-launch JupyterLab.

While computing
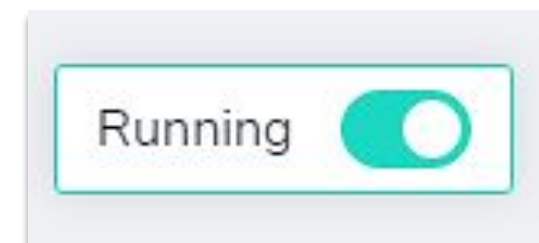
The status button will say "Running"

If you close the JupyterLab tab while the environment is running, click the "Launch: jupyterlab" button to get the tab back.

If you click the dropdown arrow, you can also use regular Jupyter.

To stop computing

Click the status button

Before you stop the execution environment by clicking the status button, **make sure to save your work in Jupyter.**

Gigantum versions wth a "copy on write" & "record on execute" model, so saving your work makes sure a final version is created.

Using Gigantum: Publishing a Project

- The top bar has features for versioning and publishing the Project.
- First stop the execution environment.
- Then click the "Publish" button to push the Project to the cloud repository.
- Select "Public" or "Private".
- After it is published, the Publish button will change to "Sync".
  - As you work, the "commits ahead/behind" numbers will change in the button.
  - Click "Sync" to sync your changes with the cloud and the count will be reset.