

# Prepare your PyTorch resource on Saturn Cloud

Hands-on 3 VAE

Hands-on 4 Reconstruction

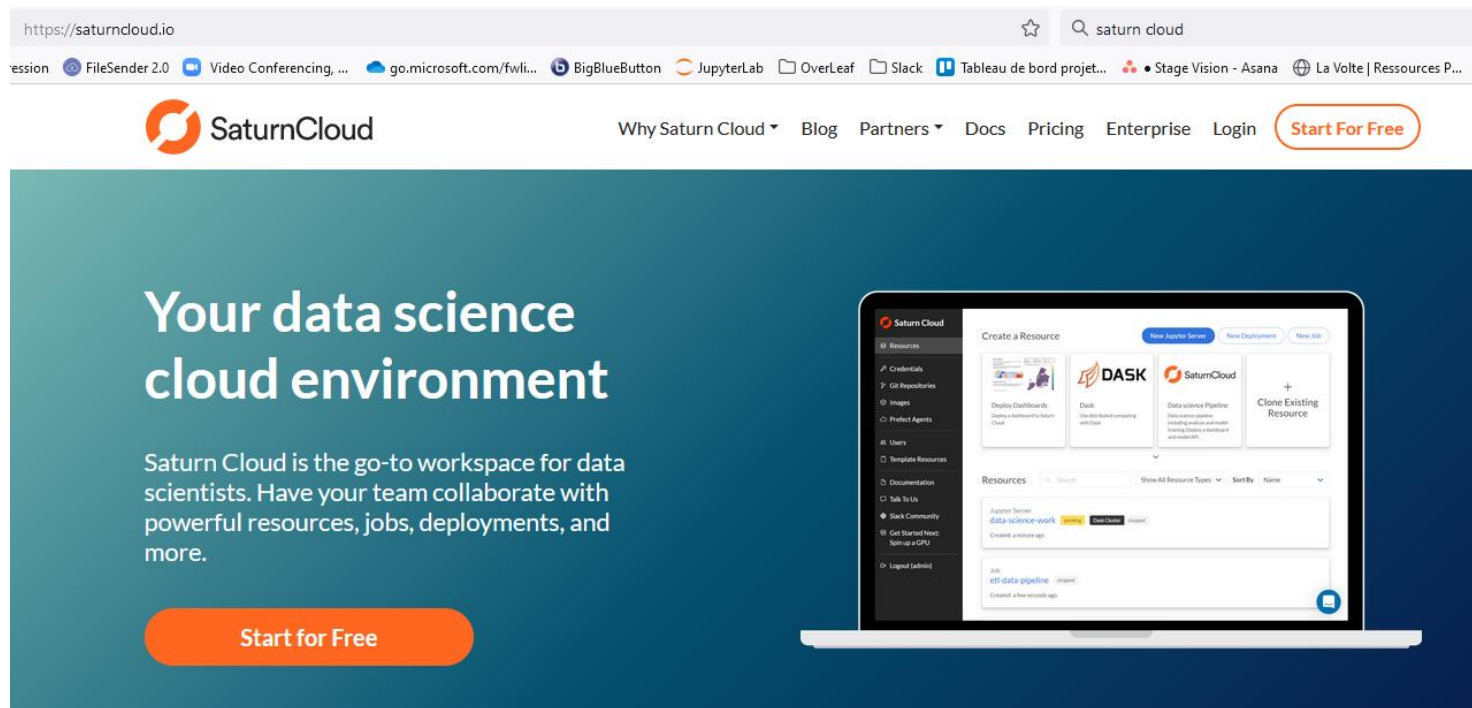
Challenge - MONAI

# Steps required

1. Create an account on a cloud platform (Saturn Cloud)
2. Create a jupyter server and parametrize it on this cloud
3. Start the jupyter server
4. Launch the Jupyter lab environment

# 1- Create an account (if not already done !)

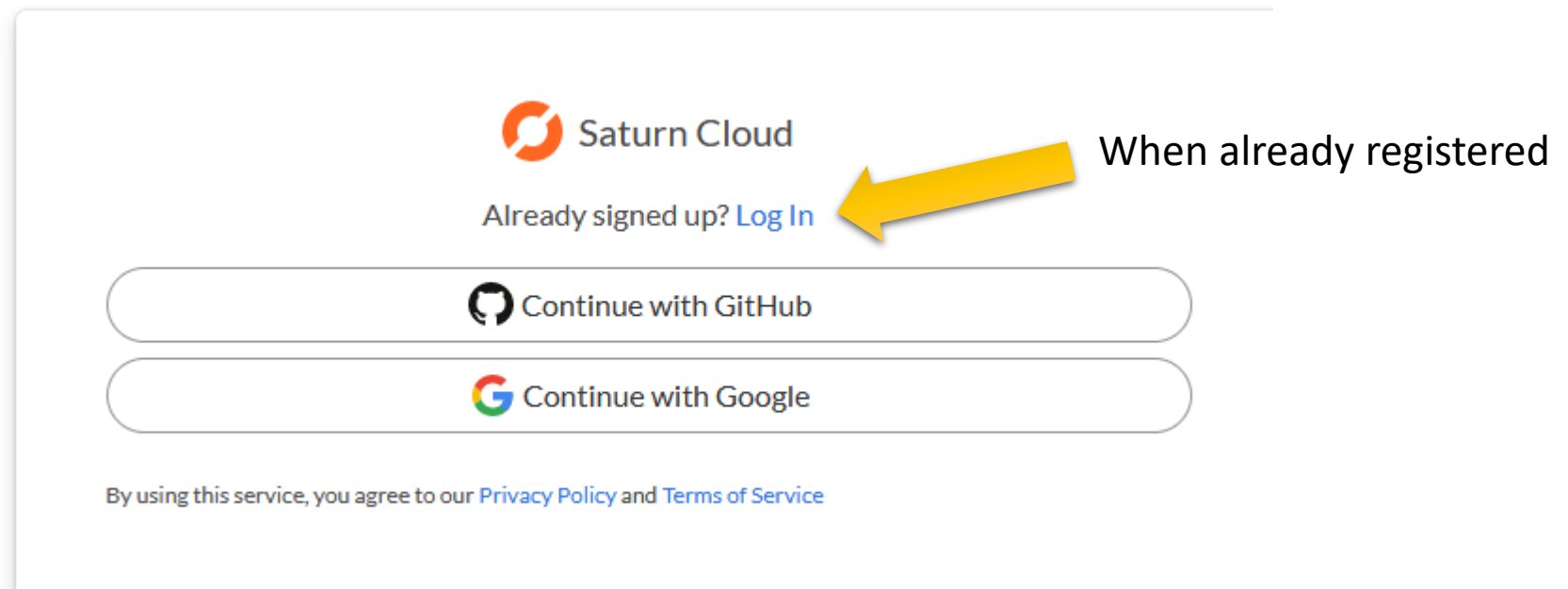
- It's free, « just » need an email adress
- Connect on <https://saturncloud.io> and clic on « Start for Free »



The screenshot shows the Saturn Cloud website. The browser address bar displays <https://saturncloud.io>. The page header includes the Saturn Cloud logo, navigation links for 'Why Saturn Cloud', 'Blog', 'Partners', 'Docs', 'Pricing', 'Enterprise', and 'Login', and a prominent 'Start For Free' button. The main content area features the headline 'Your data science cloud environment' and a sub-headline: 'Saturn Cloud is the go-to workspace for data scientists. Have your team collaborate with powerful resources, jobs, deployments, and more.' Below this is another 'Start for Free' button. On the right, a laptop displays the 'Create a Resource' interface, which includes options for 'New Jupiter Server', 'New Deployment', and 'New Job', along with a 'Clone Existing Resource' button. The interface also shows a list of resources, including 'data-science-work' and 'ml-data-pipeline'.

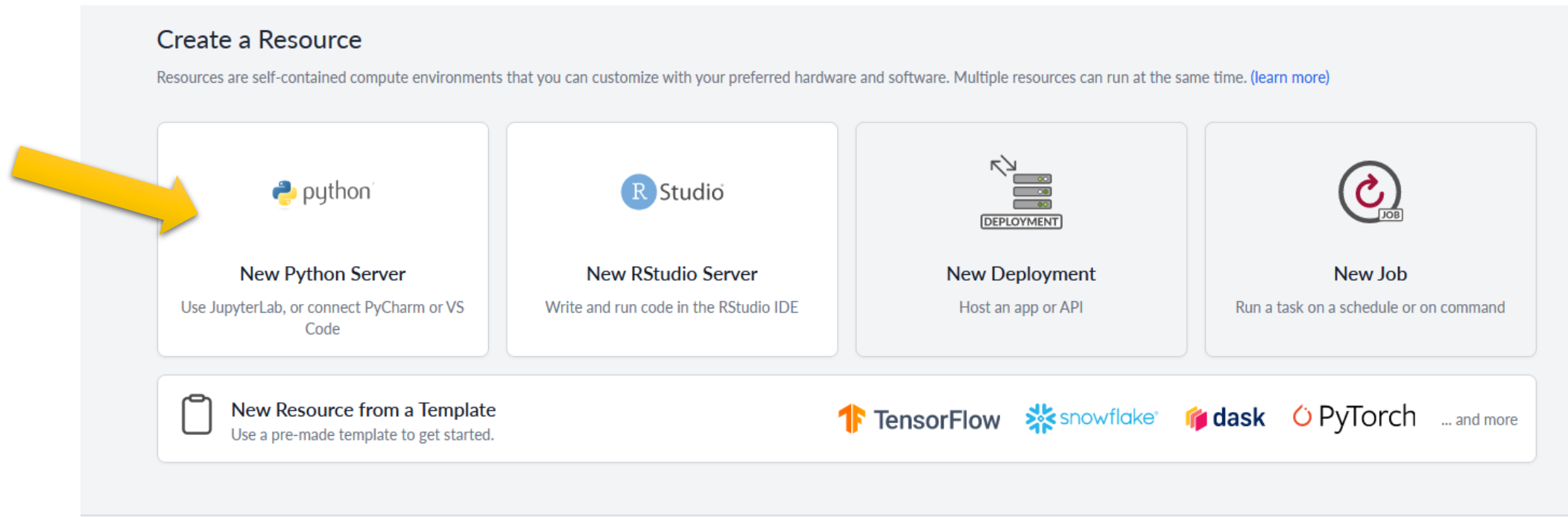
# 1- create an account

- You can use one of your GitHub or Google account
- Optionnaly, you can create a Saturn Cloud account



## 2- Create your jupyter server

- Hands-on are Jupyter notebooks, so create first a new Python server on Saturn Cloud



**Create a Resource**  
Resources are self-contained compute environments that you can customize with your preferred hardware and software. Multiple resources can run at the same time. [\(learn more\)](#)

**New Python Server**  
Use JupyterLab, or connect PyCharm or VS Code

**New RStudio Server**  
Write and run code in the RStudio IDE

**New Deployment**  
Host an app or API

**New Job**  
Run a task on a schedule or on command

**New Resource from a Template**  
Use a pre-made template to get started.

TensorFlow snowflake dask PyTorch ... and more

## 2- Server Parameters 1/4

Give a name (Pytorch-Hands-On is nice)



The screenshot shows a configuration form for a Jupyter server. At the top left, there is a rocket icon and the word "Overview". At the top right, there is a link that says "Hide Advanced Options". Below this, there are two columns: "Owner" and "Name". Under "Owner", the text "thomasgre /" is visible. Under "Name", there is a text input field containing "ML-HandsOn-2". A large yellow arrow points from the rocket icon to the "Name" field. Below the "Name" field is a "Description" section with a large text area. At the bottom of the description area, it says "Briefly describe this Jupyter server. (Characters left: 255/255)".

# 2- Server Parameters 2/4

- Select CPU or **GPU** resources



## Hardware

The hardware your Jupyter server will run on.

### Hardware

CPU

An instance with only CPU processors.



GPU

An instance with both CPU and GPU processors.

### Size

Large - 2 cores - 16 GB RAM

Disabled options are not supported due to your account limit. To increase the limit, please



## Hardware

The hardware your Jupyter server will run on.

### Hardware

CPU

An instance with only CPU processors.

GPU

An instance with both CPU and GPU processors.




### Size

T4-XLarge - 4 cores - 16 GB RAM - 1 GPU

Disabled options are not supported due to your account limit. To increase the limit, please

## 2- Server Parameters 3/4

- Select the desired image : saturncloud/saturn-python-pytorch
- For version, use the 2023.02.01 or, if no other information specified

 **Environment** [Hide Advanced Options](#)  
The software your Jupyter server will use. This includes libraries, packages, environment variables, and other attributes.

**Image** **Version**

saturncloud/saturn-python-pytorch 2022.03.01

**Working Directory**

/home/jovyan/examples/examples/pytorch

**Extra Packages**  
Extra packages are installed every time the resource starts up - right before the start script. Use spaces to separate packages.  
If you find yourself adding the same packages to lots of resources, you may want to permanently add packages to a custom image instead. [?](#)



## 2- Server Parameters 4/4



**ATTENTION**

→ **Pip Install, add the following**  
opencv-python

→ **Apt Packages add the following**  
htop zip unzip python3-opencv

**Both must be done**

**Extra Packages**  
Extra packages are installed every time the resource starts up - right before the start script. Use spaces to separate packages. If you find yourself adding the same packages to lots of resources, you may want to permanently add packages to a custom image instead. (?)

Conda Install     Pip Install     Apt Packages

`htop zip unzip python3-opencv`

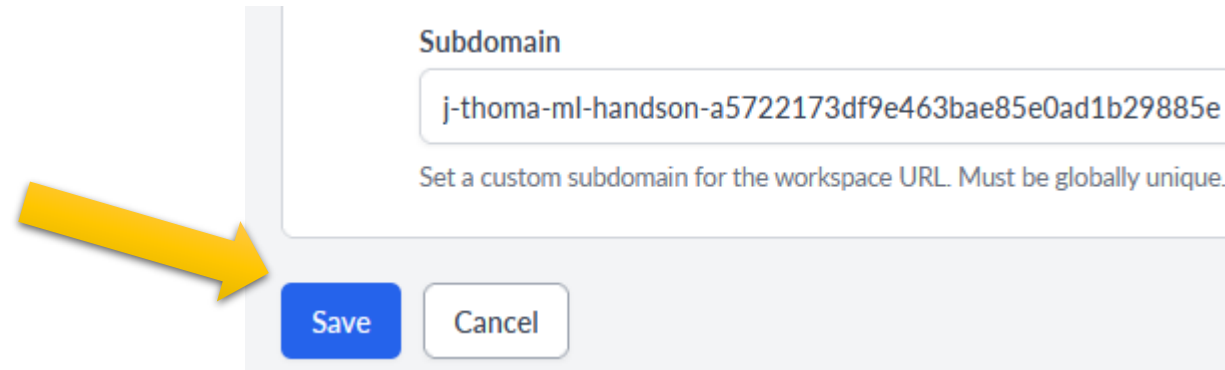
The packages together will run the following script:

```
apt-get install htop zip unzip python3-opencv
pip install opencv-python
```

**Environment Variables**

```
name = value
```

## 2- Server Parameters : Save



Subdomain

Set a custom subdomain for the workspace URL. Must be globally unique.

**Save** Cancel

# 3- Start the jupyter server (few minutes)

Jupyter Server  
thomasgre / ML-HandsOn

Image: saturncloud/saturn-tensorflow:2021.07.26-2  
Working Directory: /home/jovyan/git-repos  
Extra Packages:  
`apt-get install htop python3-opencv`  
`pip install opencv-python`

Edit Delete

Logs

### Resource Details

**Jupyter Server**


T4-XLarge - 4 cores - 16 GB RAM - 1 GPU - 10Gi Disk

stopped

Metrics  
Auto Shutoff: 1 hour  
SSH URL: (not enabled) (?)

Jupyter Lab

New Dask Cluster



# 4- Launch the Jupyter lab environment

- First, wait until the server is started 😊



# 5- Enjoy your Hands on (in a new tab)

The image shows a JupyterLab interface. On the left is a file browser for the directory `/git-repos/`. It has a table with columns for 'Name' and 'Last Modified'. Above the table is an upload button (a square with an upward arrow) and a refresh button (a circular arrow). A red arrow points from the text 'Drag and drop files here (or via the upload button)' to the upload button. On the right is the 'Launcher' panel, which is currently active. It shows options for 'git-repos', 'Notebook', 'Console', and 'Other'. Under 'Notebook', there are two 'saturn (Python 3)' options. Under 'Other', there are icons for 'Terminal', 'Python File', 'Text File', 'Markdown File', and 'Show Contextual Help'. A green arrow points from the text 'Launcher tab' to the 'Launcher' tab in the top bar of the interface.

Drag and drop files here  
(or via the upload button)

Launcher tab