## **Getting started with JupyterHub**

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## Sign in JupyterHub

URL: <a href="https://ba-lab.fairfield.edu/hub/login">https://ba-lab.fairfield.edu/hub/login</a>



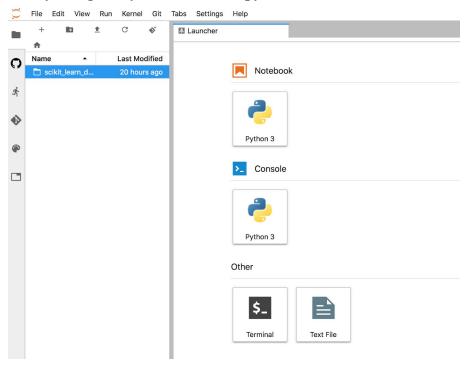
**Username:** The first letter of your first name and your last name.

For example: My name is Yue Pu. My username is ypu.

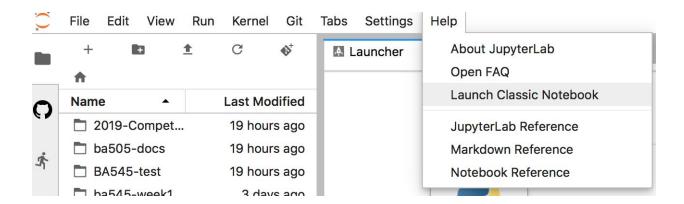
**Password:** Create your password when you first log in.

## **Change Jupyter Hub interface**

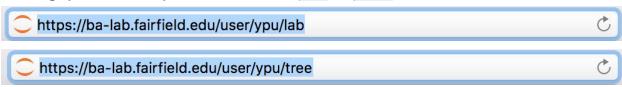
After you sign in, you will see a JupyterLab interface.



You can change from JupyterLab interface to classic notebook interface from **Help**. Click **Launch Classic Notebook**.



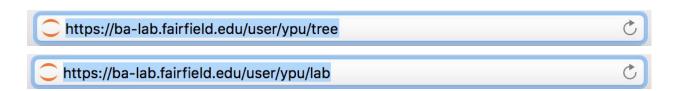
The second way you can change from JupyterLab interface to classic notebook interface is change your URL in your browser from /lab to /tree.



The classic notebook interface shows below.

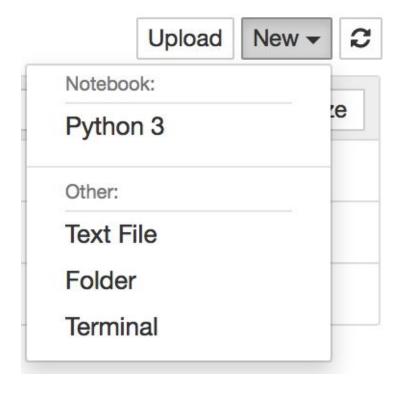


For the JupyterLab interface: change /tree to /lab.

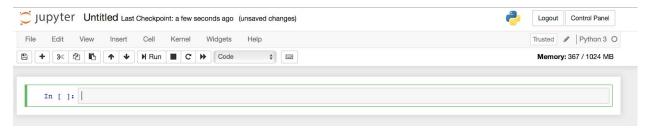


# Create Notebook/Text File/Folder/Terminal in classic notebook interface

Click the **New** drop-down button in the top-right and select **Python 3 /Text File/Folder/Terminal**.



### The **notebook** shows below:



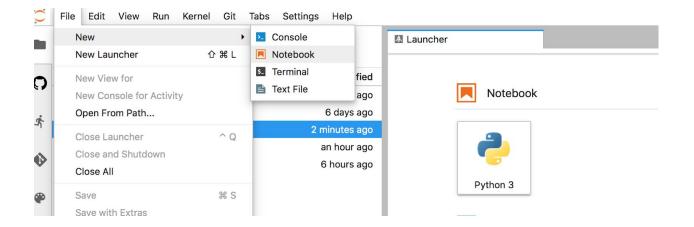
### The **Terminal** shows below:



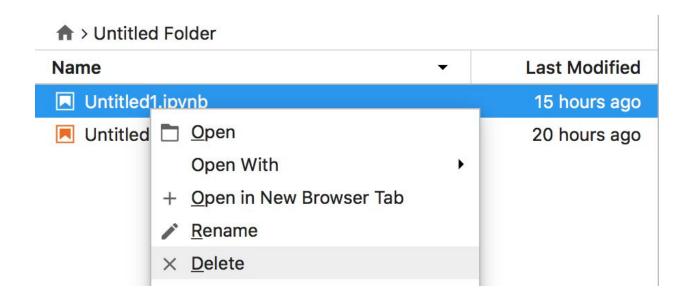
jupyter-ypu@ip-172-31-45-198:~\$

## Create/delete a new notebook in JupyterLab

You can create a new notebook from **File** or **Launcher**.

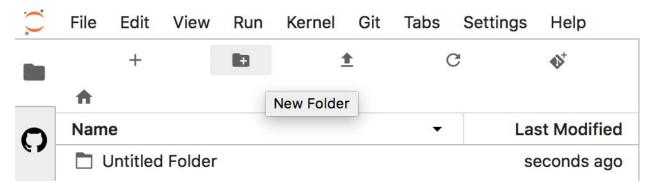


You can delete a notebook by right click the name of notebook in File Browser.

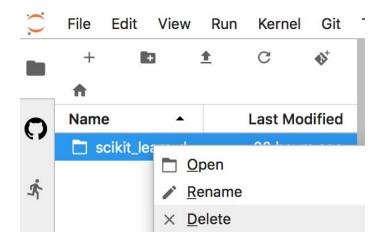


## Create/delete a new folder in JupyterLab

You can create a new folder by click the small plus folder sign.



You can delete an empty folder by right click the name of folder in File Browser.



If you want to delete a folder with data, it is not allowed. You will get **Delete Failed**. You need to delete data first to make the folder empty.



Or you can use command line to delete the folder with data:

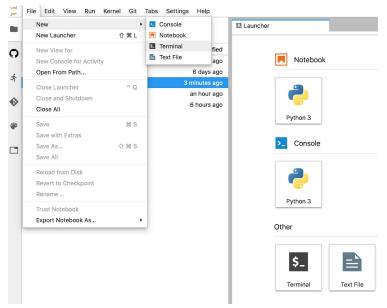
\$ rm -rf <folder name>

jupyter-ypu@ip-172-31-45-198:~\$ rm -rf scikit\_learn\_data

After deleting the folder, you can Refresh File List to check.

## Open a Terminal in JupyterLab

You can open a new Terminal from **File** or **Launcher**.

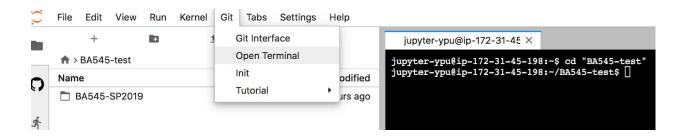


### Terminal interface:



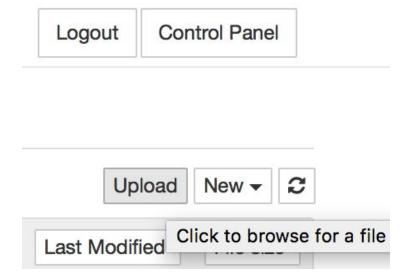
## Open a Terminal in JupyterLab Git

When you are in a repository, you can click **open Terminal** in **Git**, it will automatic lead your working directory to your repository.

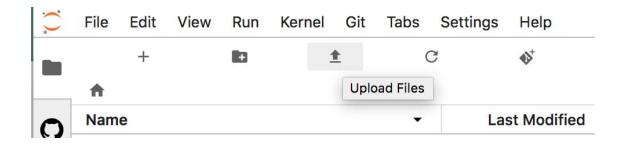


## Upload files from local computer

In Classic notebook interface:



In JupyterLab interface:



## Use cd, ls, pwd commands to change working directory in a Terminal

pwd is a command to display the present working directory ls displays a listing of files in the current folder cd command is to change files

```
jupyter-test_user1@ip-172-31-7-235:~$ pwd
/home/jupyter-test_user1
jupyter-test_user1@ip-172-31-7-235:~$ ls
1030note.ipynb course-schedules-part-3-ypff course-schedules-part-4-ypff
jupyter-test_user1@ip-172-31-7-235:~$ cd course-schedules-part-4-ypff
```

## Clone repository from GitHub to JupyterHub

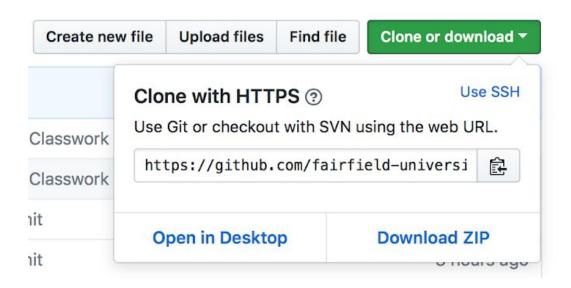
### Go back to your home folder

Everytime before you clone a new repository, check if you are in home folder, make sure you do not clone to another repository.

```
jupyter-test_user1@ip-172-31-7-235:~$ pwd
/home/jupyter-test_user1
```

/home/jupyter-<your jupyterhub username> means you are in your home folder.

### Go to GitHub and copy the repository URL



### git clone in Terminal

\$ git clone <paste the repository url>

jupyter-test\_user1@ip-172-31-7-235:~\$ git clone https://github.com/fairfield-university-k

Note: If you can not paste successfully, please try "shift+ctrl+v" to paste.

## **Submit your work to Github**

### Saving your work in Jupyterhub

git add in Terminal

\$ git add . - add all current changes

jupyter-test@ip-172-31-7-235:~/course-schedules-part2-ypff\$ git add .

git commit in Terminal

\$ git commit -m "message" - The -m followed by a commit message

jupyter-test@ip-172-31-7-235:~/course-schedules-part2-ypff\$ git commit -m "Completed Classwork"

### It needs you to tell who you are when you first commit.

```
*** Please tell me who you are.

Run

git config --global user.email "you@example.com"
git config --global user.name "Your Name"

to set your account's default identity.
Omit --global to set the identity only in this repository.

fatal: empty ident name (for <jupyter-test@ip-172-31-7-235.us-east-2.compute.internal>) not allowed

$ git config --global user.email "your GitHub account email"

$ git config --global user.name "your GitHub username"

jupyter-test_user!@ip-172-31-7-235:-/course-schedules-part-4-ypff% git config --global user.email "yue.pu@student.fairfield.edu"
jupyter-test_user!@ip-172-31-7-235:-/course-schedules-part-4-ypff% git config --global user.name "ypff"
```

After you tell who you are you need git commit again.

```
$ git commit -m "message"
```

```
jupyter-test@ip-172-31-7-235:~/course-schedules-part2-ypff$ git commit -m "Completed Classwork"
```

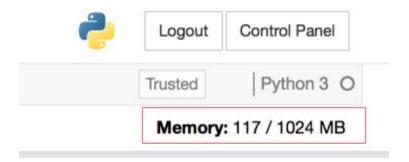
git push: Push your changes to GitHub repository.

```
$ git push
Username for 'https//github.com':
Password for 'https//github.com':
```

```
jupyter-test_user1@ip-172-31-7-235:~/course-schedules-part-4-ypff$ git push
Username for 'https://github.com': Ypff
Password for 'https://Ypff@github.com':
```

### **Shutdown Running processes**

The maximum memory allowed per student is 1GB. It is shown in the top right corner of the notebook interface. Note that this is memory usage for everything your user is running through the Jupyter notebook interface, not just the specific notebook it is shown on.



You need to **Shutdown** all running processes every day when you finish your work. It will help you save your memory for your next class.

### In classic notebook interface:



### In JupyterLab interface:

