

Running Jupyter Lab on ENGR Server

AI534

Sept, 2025

1 Set SSH Tunnel to Run Jupyter on ENGR Server

If you want to use Jupyter Lab/Notebook but don't have it installed locally, you need to use an SSH tunnel to access the Jupyter service on the server (set up by the TA).

1.1 log in the ENGR server

On Unix and Mac machines, open a terminal and run the following command line to log in to the server.

```
$ ssh <username>@access.engr.oregonstate.edu
```

To log in a specific server (e.g. `flip1`), use the command line:

```
$ ssh <username>@flip1.engr.oregonstate.edu
```

If you are already on a flip server (e.g. `flip2`) and you want to hop on `flip1`:

```
flip2 ~ 1000$ ssh flip1
```

Windows users can use PuTTY to access the server. Please check and follow steps in this link:
<https://it.engineering.oregonstate.edu/accessing-unix-server-using-putty-ssh>

1.2 launch Jupyter Lab on the server

To launch the Jupyter Lab using TA's conda environment with Python3, run the command line:

```
flip1 ~ 1000$ /nfs/guille/huang/users/wuzet/envs/ai534/bin/jupyter lab
```

```
[I 2025-09-29 14:24:58.437 ServerApp] nbclassic | extension was successfully loaded.
[I 2025-09-29 14:24:58.439 ServerApp] The port 8888 is already in use, trying another port.
[I 2025-09-29 14:24:58.440 ServerApp] Serving notebooks from local directory: /nfs/stak/users/wuzet
[I 2025-09-29 14:24:58.440 ServerApp] Jupyter Server 2.17.0 is running at:
[I 2025-09-29 14:24:58.440 ServerApp] http://localhost:8889/lab?token=77c36492616f09f740868f92061252e72ce8baa6ff03f928
[I 2025-09-29 14:24:58.440 ServerApp] http://127.0.0.1:8889/lab?token=77c36492616f09f740868f92061252e72ce8baa6ff03f928
[I 2025-09-29 14:24:58.441 ServerApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).
[W 2025-09-29 14:24:58.459 ServerApp] No web browser found: Error('could not locate runnable browser').
[C 2025-09-29 14:24:58.459 ServerApp]

To access the server, open this file in a browser:
file:///nfs/stak/users/wuzet/.local/share/jupyter/runtime/jpserver-3854377-open.html
Or copy and paste one of these URLs:
http://localhost:8889/lab?token=77c36492616f09f740868f92061252e72ce8baa6ff03f928
http://127.0.0.1:8889/lab?token=77c36492616f09f740868f92061252e72ce8baa6ff03f928
```

Copy the the highlighted URL and notice the port (four digits after **localhost:** in the URL). In this case, the port is **8889**. The port number will be automatically assigned. Next use the specific port to build a SSH tunnel on your local machine.

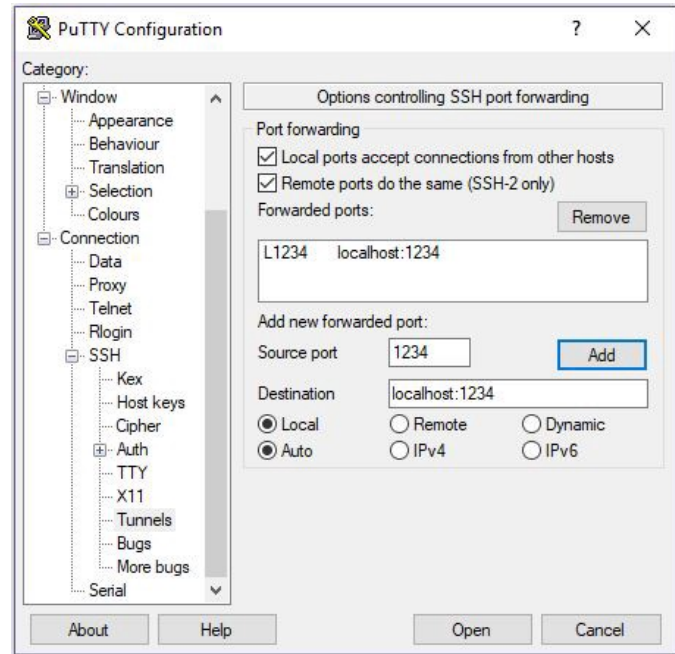
1.3 build the SSH tunnel

On Unix or Mac machines, start up a local terminal and run:

```
$ ssh -N -L localhost:8889:localhost:8889 <username>@flip1.engr.oregonstate.edu
```

Replace the port (8889) in the command line when the server assigns a different port for the Jupyter notebook. You won't get any feedback, but you will be connected.

Windows users can use PuTTY to start the SSH tunnel. You can do it as follows and note that replace the port number (1234) with the correct one:



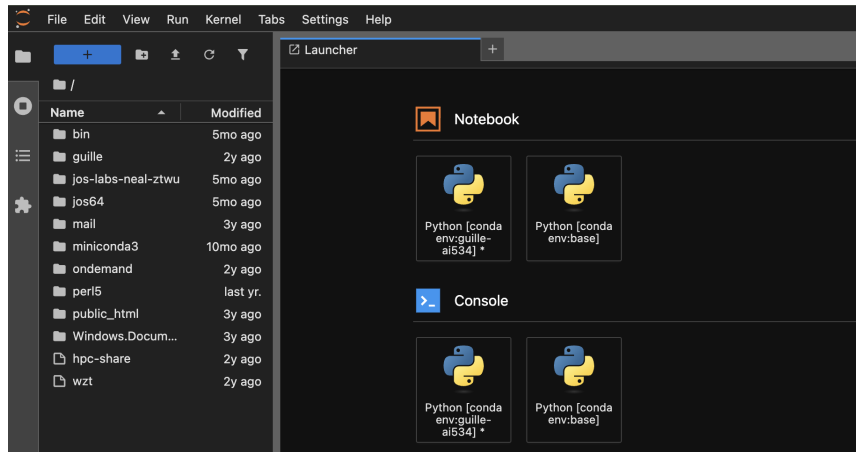
1.4 open the Jupyter Lab link

Open the browser and paste the URL generated after you launch the Jupyter Lab on the server:

```
[I 2025-09-29 14:24:58.437 ServerApp] nbclassic | extension was successfully loaded.
[I 2025-09-29 14:24:58.439 ServerApp] The port 8888 is already in use, trying another port.
[I 2025-09-29 14:24:58.440 ServerApp] Serving notebooks from local directory: /nfs/stak/users/wuzet
[I 2025-09-29 14:24:58.440 ServerApp] Jupyter Server 2.17.0 is running at:
[I 2025-09-29 14:24:58.440 ServerApp] http://localhost:8889/lab?token=77c36492616f09f740868f92061252e72ce8baa6ff03f928
[I 2025-09-29 14:24:58.440 ServerApp] http://127.0.0.1:8889/lab?token=77c36492616f09f740868f92061252e72ce8baa6ff03f928
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http://127.0.0.1:8889/lab?token=77c36492616f09f740868f92061252e72ce8baa6ff03f928
```

If you can see the page like the following figure, you open the Jupyter Lab successfully! 🎉👍 You are supposed to use ai534 environment for homeworks as necessary packages have been pre-installed for you.



1.5 close the Jupyter Lab and release the ports

Keep in mind that first use **Control-C** to stop the SSH tunnel you built in step **1.3**, then use **Control-C** to stop the Jupyter service on the server and shut down all kernels (twice to skip confirmation), otherwise the ports won't be released successfully.

2 Use TA's environment directly (optional)

If you want to use TA's environment directly without `jupyter` for quick test, you can choose to use the TA's conda environment by `export` the path of TA's environment into your own `PATH`:

```
flip1 ~ 994$ export PATH=/nfs/guille/huang/users/wuzet/envs/ai534/bin/:$PATH
```

Then your default command will use TA's environment directly.

```
flip1 ~ 995$ which python
/nfs/guille/huang/users/wuzet/envs/ai534/bin/python
flip1 ~ 996$ which jupyter
/nfs/guille/huang/users/wuzet/envs/ai534/bin/jupyter
flip1 ~ 997$ python
Python 3.11.1 (default, Sept 11 2025, 14:32:07)
[GCC 7.3.0] :: Anaconda, Inc. on linux
Type "help", "copyright", "credits" or "license" for more information.
>>> import numpy as np
>>> import pandas as pd
>>>
```