**Python Project Virtual Environment Setup**

# set up a Python virtual environment  
qlogin -now no  
module load python/python-3.10.4 # or other versions. use 'module avail python' to see available versions

module load gcc/gcc-11.3.0 # use 'module avail gcc' to see available versions

mkdir PROJECTNAME  
cd PROJECTNAME  
python -m venv venv3104 # or venv<PYTHON\_VERSION>   
source venv3104/bin/activate  
python -m pip install -U pip  
python -m pip install -U setuptools wheel  
logout # optional

#### ****Jupyter Lab Setup****

# set up Jupyter Lab in an existing virtual environment  
qlogin -now no # only if logged out  
module load python/python-3.10.4 # only if logged out  
module load gcc/gcc-11.3.0 # only if logged out  
source PROJECTNAME/venv3104/bin/activate # only if logged out  
python -m pip install jupyterlab nodejs  
mkdir ~/.jupyter  
cp /usr/local/demo/Python/Notebook/jupyter\_lab\_config.py ~/.jupyter  
logout # optional

#### ****Using Jupyter Lab****

qlogin -now no # only if logged out

module load python/python-3.10.4 # only if logged out  
module load gcc/gcc-11.3.0 # only if logged out   
source PROJECTNAME/venv3104/bin/activate # only if logged out

jupyter lab

Then, follow the instructions printed to:

1. Create a tunnel in another terminal window
2. Connect to the Jupyter Lab through that tunnel

#### ****Modules (from within Jupyter Lab)****

!pip install <MODULE\_NAME>