# Linux Subsystem for Windows

To get a Linux subsystem for windows. This can be done using the **Windows App Store**. I use Ubuntu, but most Linux based OS’s will work.

Use this command to get to your windows drive: “cd /mnt/c/”

From there navigate to your python .tgz file and use this tutorial to install:

<https://medium.com/@lupiel/installing-python-from-a-tgz-file-a-step-by-step-guide-4cf5f4a17a86>

# Virtual Environments for the HiperGator

(UNDER DEVELOPMENT)

Helpful Links

General HiperGator Tutorial: <https://wiki.weecology.org/docs/computers-and-programming/hipergator-intro-guide/>

Guide for getting started with Python on the HPC: <https://help.rc.ufl.edu/doc/Python>

Tips

Guide

In a HPC terminal:

1. module load python
2. cd /to/folder/where/to/install/virtualenv/
3. python -m venv ./venv
4. try to activate venv: “source ./venv/bin/activate”
5. a (venv) should appear in front of your username and current dir tag:

A black background with white text

Description automatically generated

1. check install:

>>> import os

>>> import sys

>>> os.path.dirname(sys.executable)

ERROR. If any path other than the python in your venv appears contact IT via slack or help tickets.

1. Exit the python interpreter: exit()
2. Pip install your desired packages: python -m pip install <desired package>
3. Have fun.

Recommended Packages: PyTorch, Scipy, scikit-learn, ipykernel

Setting up Visual Studio Code for Remote Development: <https://help.rc.ufl.edu/doc/VS_Code_Remote_Development>

1. Download the CLI x64 Linux version from: <https://code.visualstudio.com/#alt-downloads>
2. Copy tar.gz to folder on blue drive
3. Install using a hipergator terminal: tar -xvf vscode\_cli\_alpine\_x64\_cli.tar.gz
4. Cp code ~/bin/ (If it gives you an error that the directory doesn’t exist, make the dir using “mkdir” command
5. Start a slurm dev session: srundev
6. Start vscode tunnel: .code tunnel **or** ~/bin/code tunnel
7. You will prompted to login with a Microsoft or GitHub account. Choose the one that your VSCode install is linked to.
8. In VSCode in the bottom left click on the “Accounts” icon (looks like a little dude) then press “Enable remote tunnel access”.
9. You will then be prompted that you are connecting to the HiperGator remote session and given the option to copy a URL. Copy the URL and paste in a browser.

~~(THIS DOESN’T ALLOW EDITING OF CODE) Setting up your Linux Subsystem for Windows:~~ [~~https://help.rc.ufl.edu/doc/Samba\_Access~~](https://help.rc.ufl.edu/doc/Samba_Access)

1. ~~Open your Linux subsystem via the windows app. You can also do this in visual studio code by going to “Terminal” in the top bar and clicking “New Terminal”. Now in the bottom right click the down arrow next to the “+” sign and click on your WSL install. E.g., if you are using ubuntu it will look like: “Ubuntu (WSL)”.~~
2. ~~Install cifs-utils: sudo apt-get install cifs-utils~~
3. ~~Make the dir to link the blue-drive to:~~ 
   1. ~~Cd /mnt/~~
   2. ~~Mkdir ./blue~~
   3. ~~Mkdir ./blue/dferris~~
4. ~~Link blue drive: sudo mount -t cifs -v -o user=<gatorlink username>,domain=ufad,sec=ntlmssp //exasmb.rc.ufl.edu/blue/dferris /mnt/blue/dferris~~
5. ~~Activate visual studio code editing:~~ 
   1. ~~See.~~ [~~https://code.visualstudio.com/docs/remote/wsl-tutorial~~](https://code.visualstudio.com/docs/remote/wsl-tutorial)
   2. ~~Make sure you have the WSL and Remote Development extensions installed on your local windows OS.~~
   3. ~~In the VS code Linux terminal: cd /to/your/python/venv/~~
   4. ~~Type: code .~~
   5. ~~This should install vscode in your local folder and open a vscode editor.~~
   6. ~~In the new vscode editor activate your venv and have fun.~~

Issues

1. ~~(FIXED) Initial issues~~

~~You would need to contact IT and make them install CPython, Matplotlib, and FOOOF onto your desired python install.~~

~~See. For a list of compatible versions of python for matlab:~~ [~~Versions of Python Compatible with MATLAB Products by Release - MATLAB & Simulink (mathworks.com)~~](https://www.mathworks.com/support/requirements/python-compatibility.html?s_tid=srchtitle_site_search_1_python%20compatibility)

~~I’ve tried:~~

* ~~An installation of python using the windows installer (or linux) to the location on the blue drive.~~
* ~~Creating a virtual environment using a loaded python version on a hipergator terminal (e.g., module load python/3.10 >> python -m venv ./venv). Hipergator doesn’t give you access to pip libraries for installation due to security issues.~~

~~The least buggy way, and unfortunately the slowest, is to use a downloaded python version for windows/mac and run it locally.~~

# UPDATES