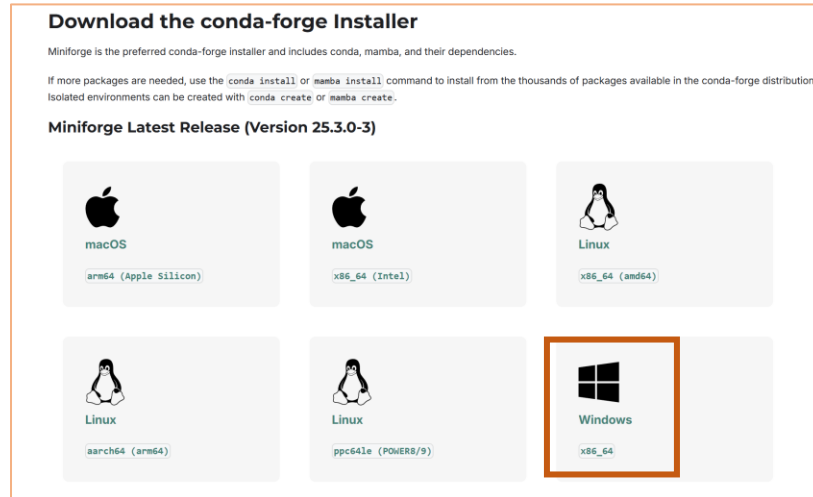


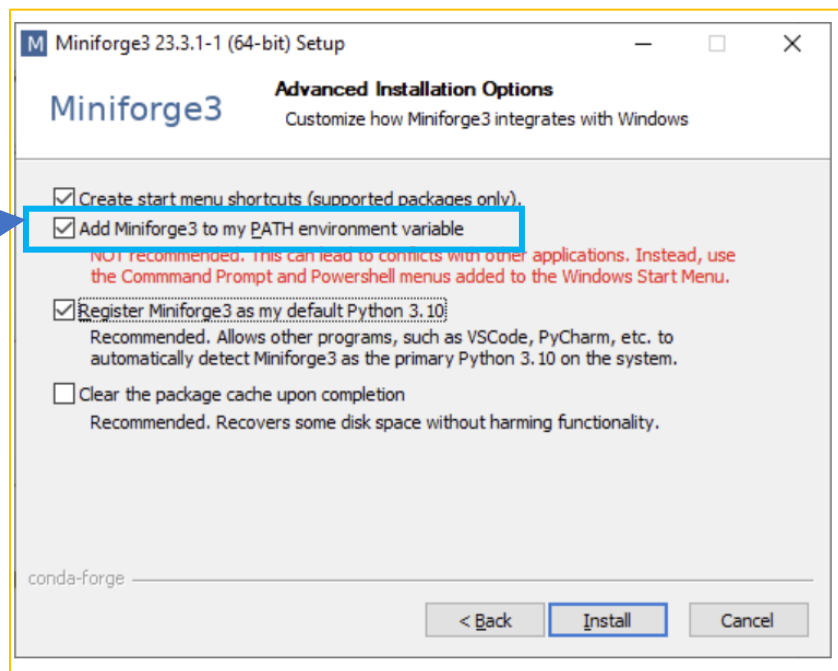
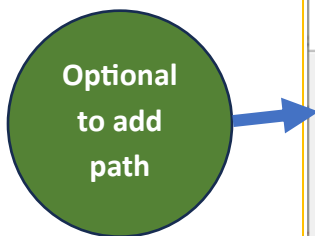
## STEPWISE TUTORIAL TO INSTALL ENVIRONMENT FOR PyGILE IN WINDOWS

### Step 1: Download miniforge using link below

<https://conda-forge.org/download/>



### Step 2: Install Miniforge;



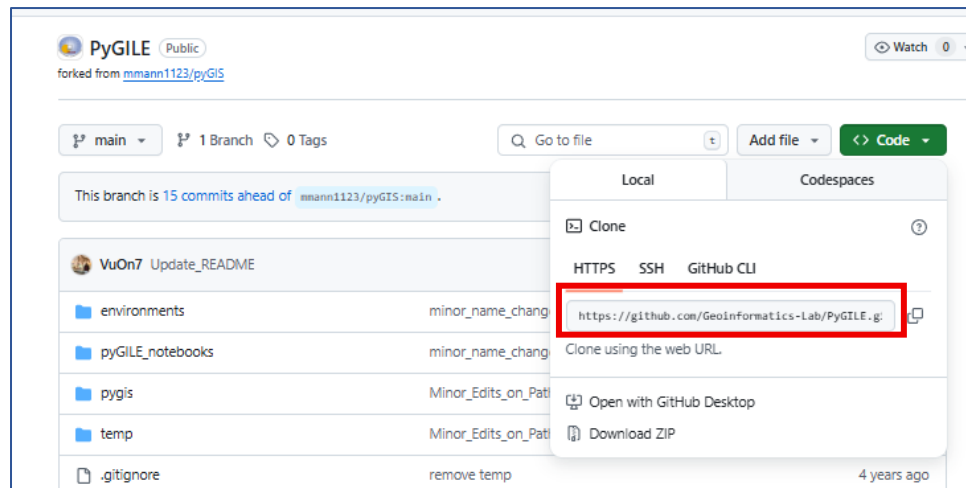
**Step 3: Clone the repo or download files from Github; [https://github.com/GeoInformatics-Lab/pyGILE]**

Here, for this tutorial, it's saved in the folder below

"C:\Users\ibhuw\Downloads\pyGILE-main.zip"; unzip it;

There will be a text file inside:

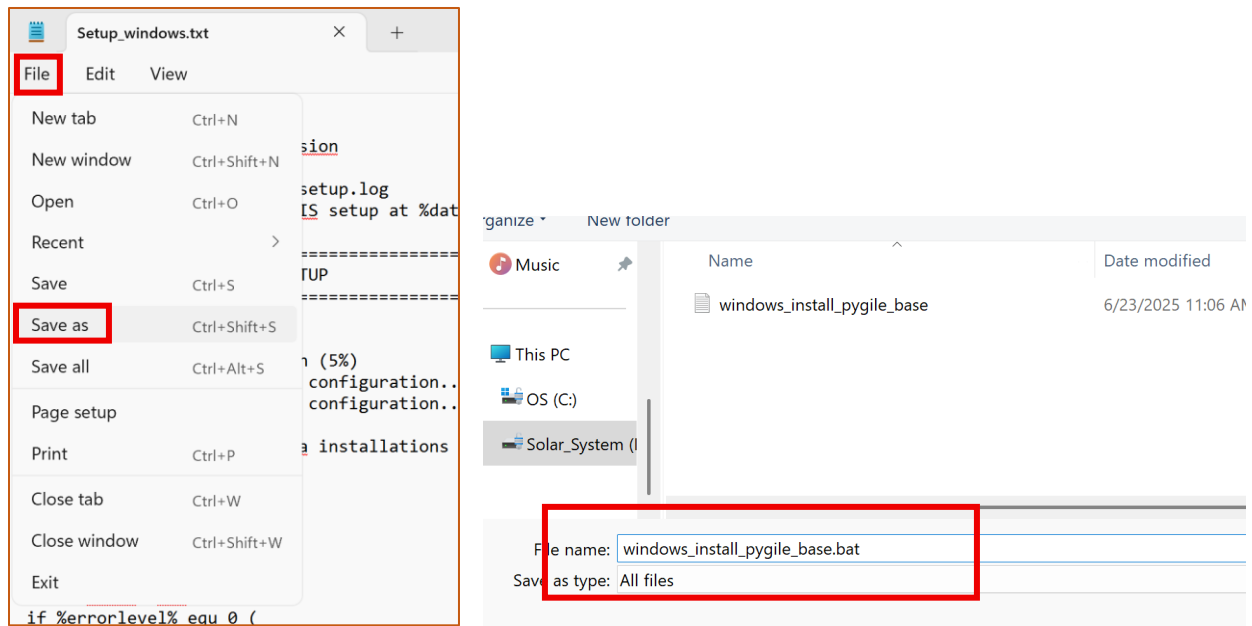
"C:\Users\ibhuw\Downloads\pyGILE-main\environments\windows\windows\_install\_pygile\_base.txt"



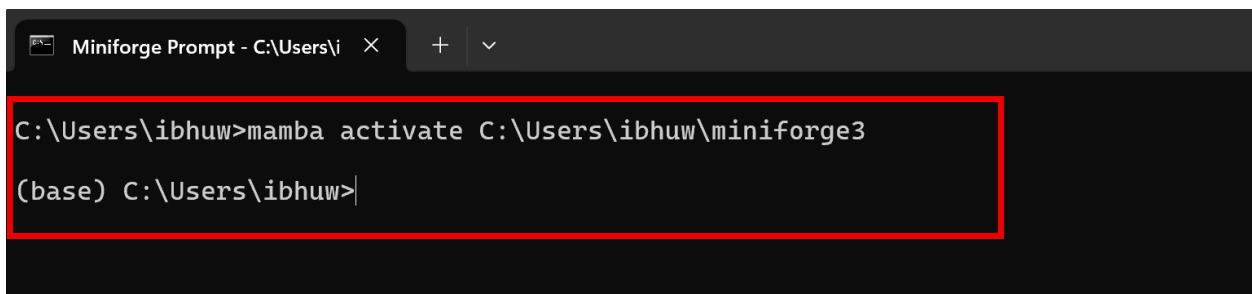
**Step 4: Open the “windows\_install\_pyGILE\_base.txt” and save as “windows\_install\_pygile\_base.bat”; change save file type as “All files”; SAVE IN THE SAME FOLDER where windows\_install\_pygile\_base.txt is present. (CHECK image below)**

E.g.

"C:\Users\ibhuw\Downloads\pyGILE-main\environments\windows\windows\_install\_pygile\_base.bat"

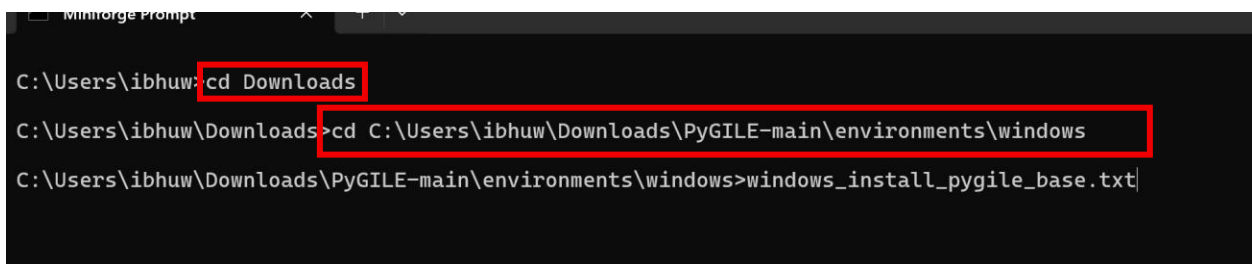


**Step 5: Now search for “miniforge prompt” from Start in windows; and open “miniforge prompt”; something like this appears (see image below)**



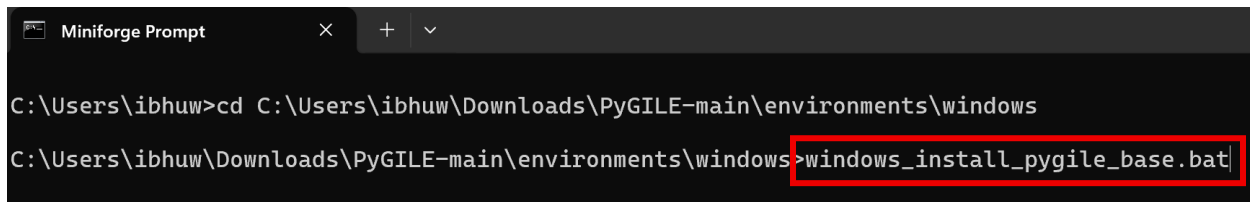
**Step 6: NOTE: cd to the directory of containing “windows\_install\_pygile\_base.bat” and then type the name of the file;**

Here, the files are downloaded in “Downloads” folder; (base) showing or not; installation will not be affected;



Step 7: Check the directory of installation; directory containing “windows\_install\_pygile\_base.bat”; a log file named “**pygile\_errors.log**” and “**pygile\_installation.log**” will be created alongside the installation to check for issues and installations.

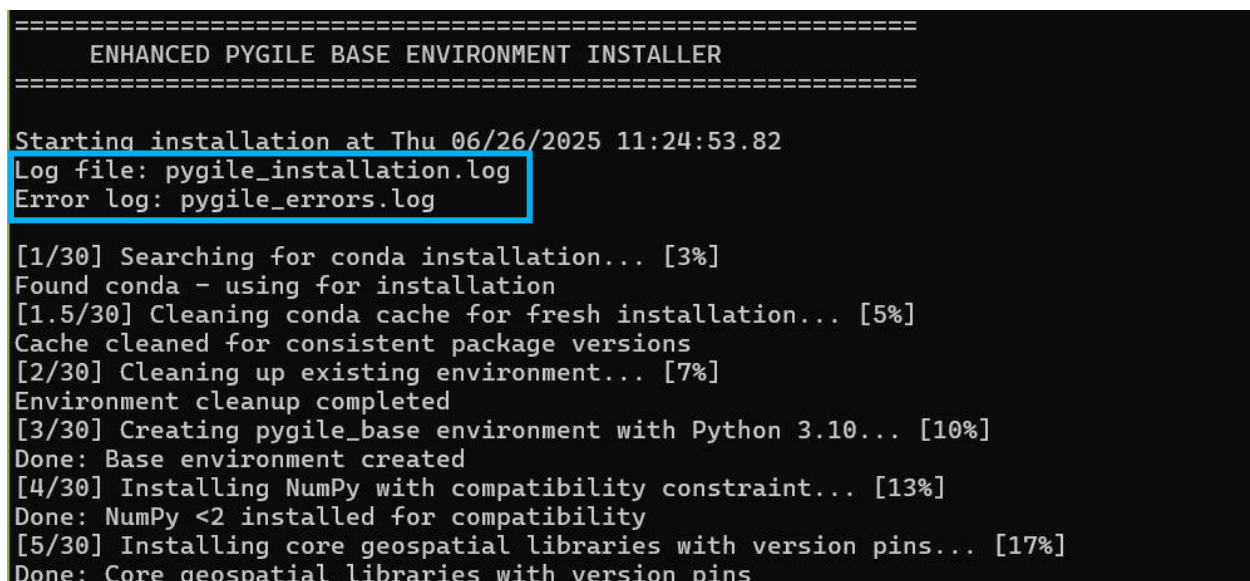
Step 8: Install the batch file by typing the name of the file “windows\_install\_pygile\_base.bat”



```
Miniforge Prompt
C:\Users\ibhuw>cd C:\Users\ibhuw\Downloads\PyGILE-main\environments\windows
C:\Users\ibhuw\Downloads\PyGILE-main\environments\windows>windows_install_pygile_base.bat
```

Check the progress as the installation continues: BE PATIENT AND keep an eye on the log file “**pygile\_errors.log**”, “**pygile\_installation.log**” generated on the same folder; such as:

"C:\Users\ibhuw\Downloads\pyGILE-main\ environments\windows\pygile\_errors.log"



```
=====
      ENHANCED PYGILE BASE ENVIRONMENT INSTALLER
=====

Starting installation at Thu 06/26/2025 11:24:53.82
Log file: pygile_installation.log
Error log: pygile_errors.log

[1/30] Searching for conda installation... [3%]
Found conda - using for installation
[1.5/30] Cleaning conda cache for fresh installation... [5%]
Cache cleaned for consistent package versions
[2/30] Cleaning up existing environment... [7%]
Environment cleanup completed
[3/30] Creating pygile_base environment with Python 3.10... [10%]
Done: Base environment created
[4/30] Installing NumPy with compatibility constraint... [13%]
Done: NumPy <2 installed for compatibility
[5/30] Installing core geospatial libraries with version pins... [17%]
Done: Core geospatial libraries with version pins
```

AFTER **SUCCESSFUL INSTALLATION**; SCREEN SIMILAR TO THIS WILL APPEAR

```
SUCCESS: Core PyGILE environment ready for use

=====
                        HOW TO USE YOUR ENVIRONMENT
=====

TO START WORKING:
1. conda deactivate      (if you see 'base' in your prompt)
2. conda activate pygile_base
3. jupyter lab

DAILY USAGE:
1. Open Anaconda Prompt / Miniforge Prompt
2. conda activate pygile_base
3. jupyter lab

INSTALLED CORE TOOLS:
- Python 3.10 with compatibility settings
- GeoPandas for vector data analysis
- Rasterio for raster data processing
- NumPy, Pandas, SciPy for data science
```

**Step 9: After successful installation of the environment “pygile\_base”;**

**before activating the newly created environment, type “conda deactivate”;** (base) will be removed now from the front;

**or activate new env in conda itself “conda activate pygile\_base”; BOTH SHOULD WORK!!**

then, activate the newly created environment using **“mamba activate pygile\_base”** in same miniforge prompt.

## **DON'T GET CONFUSED “MAMBA AND CONDA ARE THE SAME THING”**

A correctly activated environment will have “pygile\_base” written at the front (see the green rectangle)

```
Miniforge Prompt - mamba  ε  ×  +  v
C:\Users\ibhuw\Downloads\PyGILE-main\environments\windows>conda activate pygile_base
C:\Users\ibhuw\Downloads\PyGILE-main\environments\windows>mamba activate pygile_base
(pygile_base) C:\Users\ibhuw\Downloads\PyGILE-main\environments\windows>
```

### Step 10: ipykernel for Jupyter

# Install ipykernel to make your environment available in Jupyter

conda install ipykernel

# Register your current environment with Jupyter

python -m ipykernel install --user --name pygile\_base --display-name "Python (pygile\_base)"

```
(pygile_base) C:\Users\ibhuw\Downloads\PyGILE-main>python -m ipykernel install --user --name pygile_base --display-name
"Python (pygile_base)"
Installed kernelspec pygile_base in C:\Users\ibhuw\AppData\Roaming\jupyter\kernels\pygile_base
(pygile_base) C:\Users\ibhuw\Downloads\PyGILE-main>
```

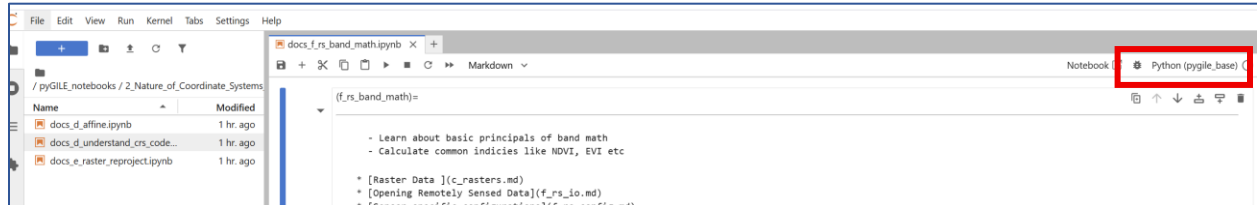
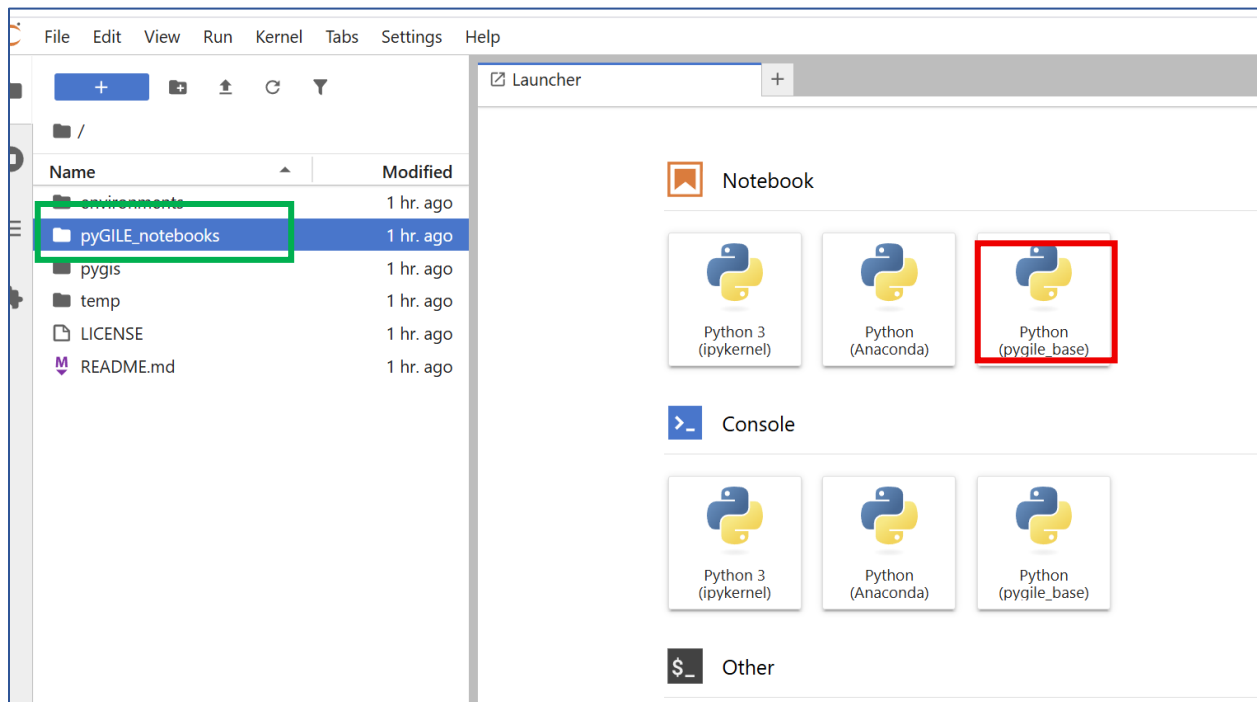
### Step 11: return back to pygis-main (cd..)

```
(pygile_base) C:\Users\ibhuw\Downloads\PyGILE-main\environments\windows>cd ../../
(pygile_base) C:\Users\ibhuw\Downloads\PyGILE-main>
```

### Step 12: Type "jupyter lab"; press enter; (wait 10-15 secs)

```
(pygile_base) C:\Users\ibhuw\Downloads\PyGILE-main>jupyter lab
[I 2025-06-26 13:17:23.720 ServerApp] jupyter_lsp | extension was successfully linked.
[I 2025-06-26 13:17:23.725 ServerApp] jupyter_server_terminals | extension was successfully linked.
[I 2025-06-26 13:17:23.733 ServerApp] jupyterlab | extension was successfully linked.
[I 2025-06-26 13:17:23.743 ServerApp] notebook | extension was successfully linked.
[I 2025-06-26 13:17:24.022 ServerApp] notebook_shim | extension was successfully linked.
```

### Step 13: A launcher window will pop up on your browser; click python3 (ipykernel (pygile\_base)



## **REGULAR USAGE**

Open miniforge prompt,

first, deactivate conda,

or activate newly formed env in coda first using conda activate pygile\_base

then mamba activate pygile\_base

then cd into the download folder of pyGIS-main;

then run jupyter lab

```
Miniforge Prompt - conda de × + v
C:\Users\ibhuw>conda activate pygile_base
C:\Users\ibhuw>mamba activate pygile_base
(pygile_base) C:\Users\ibhuw>cd downloads
(pygile_base) C:\Users\ibhuw\Downloads>cd PyGILE-main
(pygile_base) C:\Users\ibhuw\Downloads\PyGILE-main>jupyter lab
```

ENJOY\_CODING!!

ENJOY\_LEARNING!!