
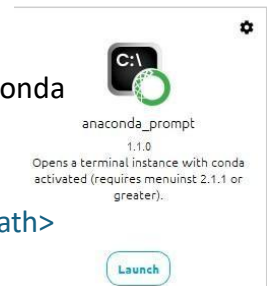


Running GP in your local desktop:

```
channels:  
  - conda-forge
```

This part in the environment.yml file suggests that the original work was done in Anaconda/Miniconda.

1. You can download Anaconda (comes with a lot of packages) or just Miniconda (smaller, lighter version)
2. Go to command prompt in conda 
3. Change the working directory to where your folder is using: `cd <folder_path>`
4. Create the environment and import dependencies via running the environment.yml file using: `conda env create -n gp_env -f environment.yml`
5. It will create an environment called gp_env. You can change the name to your preferred name.
6. Activate the environment via: `conda activate gp_env`
7. Run LUA_GP by: `python LUA_GP.py` or LUA_NSGA3 by: `python LUA_NSGA3.py`



Note: After running this above script for the first time, you do not need to download the dependencies again. Simply go to conda_prompt and activate the environment as mentioned in step 6.

!!! Note:

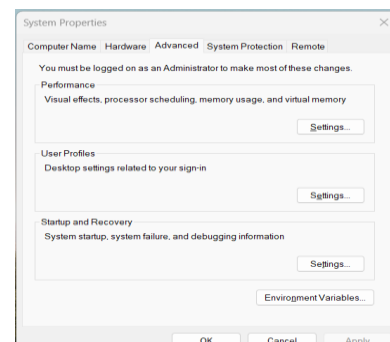
If the algorithm throws error while running vector problems during runtime as follows:

```
(base)  
marsh@Aditi-Singh MINGW64 /c:/Users/marsh/Documents/genetic_programming (master)  
$ C:/Users/marsh/anaconda3/envs/gp_env/python.exe c:/Users/marsh/Documents/genetic_p  
ERROR 1: PROJ: proj_identify: Cannot find proj.db  
ERROR 1: PROJ: proj_identify: Cannot find proj.db  
The selected data format for the land use is vector data. There are multiple choices  
lygon centroids.  
EPSG from input vector layer: "6258"  
The extent is 487293.15600005357, 499114.64600000007, 5714484.681, 5725646.705  
ERROR 1: PROJ: proj_identify: Cannot find proj.db
```

This is due to a version conflict happening with the recent updates. We need to add an PROJ_DATA environment variable.

Please follow the steps below:

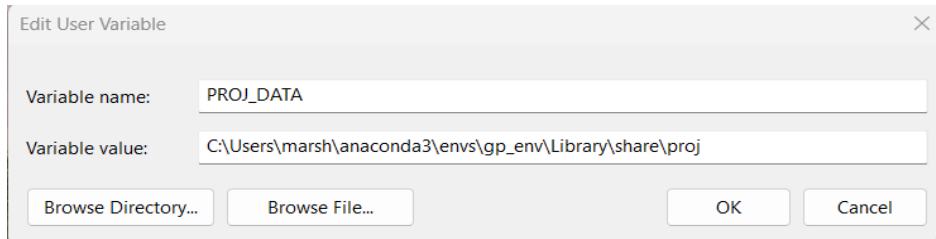
1. Search and open Edit Environment Variables option on your local pc.
2. Click on Environment Variables option.



3. In User variables add a new variable.

Variable Name: PROJ_DATA

Variable value: <custom path>



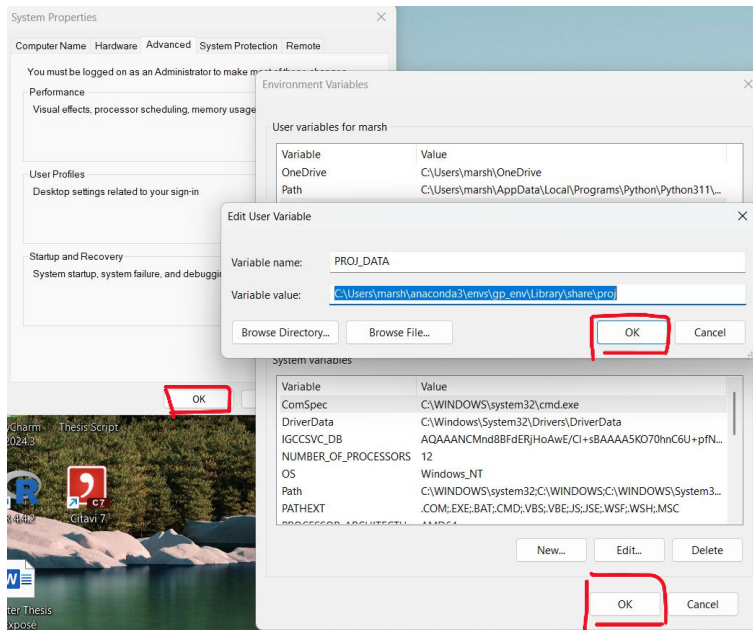
4. You can find the <custom path> by typing the codes in your conda command prompt:

```
conda activate gp_env
```

```
python -c "import pyproj; print(pyproj.datadir.get_data_dir())"
```

```
(base) C:\Users\marsh>conda activate gp_env  
  
(gp_env) C:\Users\marsh>python -c "import pyproj; print(pyproj.datadir.get_data_dir())"  
C:\Users\marsh\anaconda3\envs\gp_env\Library\share\proj
```

5. Once you are done. Click OK. OK and OK.



You can now restart your anaconda prompt and run codes by following step 6 and 7 above.