Lab 3: Working with ET data

We will be using python on a local machine in this week’s lab. You can do this from lab computers, with VDI, or on your personal computer. I would recommend at some point early on installing python so it works on your personal computer, but it’s not required for this lab.

To install python on your personal computer, I recommend the anaconda distribution. Follow this link: <https://www.anaconda.com/products/individual> to download and install Anaconda.

Once it is installed (or if you’re using a lab computer or VDI, where it’s already installed), you’ll need to create an environment with the packages we’ll be using. Open the Anaconda command prompt, and type:

conda create --name spatial rasterio geopandas matplotlib numpy spyder

conda activate spatial

conda install -c conda-forge earthengine-api

UPDATE: you also will have to install tqdm. Make sure your new environment is activated, then use the following code:

pip install tqdm

Now open spyder. You can do this from the command prompt by just typing

spyder

And hitting enter. On the top-left panel, click File > Open and open the python starter file from github. If you haven’t downloaded that yet, go ahead and do that first then open it. Make sure you also download the eddy covariance data and put it in the same directory as your python file after unzipping.

NOTE: if you get an error running google earth engine, you may have to go into Anaconda and type this:

pip install google-api-python-client==1.12.8

Go through the python file and follow the instructions. This is a ‘starter file’ to get you going, and it’s expected after you go through that, you’ll then explore the data more, and download data over your study area.