1 Using Python Scripts

Python IS the language of science. It is the easiest to learn, read, and understand high level programming language I have ever used. It’s popularity in science is exploded. Children and grad students are being taught python alike. Great scientist and students understand that python is an essential tool because of how versatile and powerful it is. Fundamentally, python was developed through the US government (DARPA) and so the means of production are owned by the public.

Windows  Install python3 using Anaconda and you can run scripts using the shell that it provides. Follow https://www.anaconda.com/products/distribution to find and download the latest Anaconda distribution. Anaconda is curated version of python that comes with lots of good tools and integration for python development. It is managed for scientist and will come pre-loaded with many of the essential libraries like Pandas (data tables), SciPy (scientific variables and function), and NumPy (high level mathematics).

Help

3. Anaconda (Conda) for Python - What & Why? https://www.youtube.com/watch?v=23aQdrS58e0

2 Libraries

Install with Pip  You will need to install libraries if not present.

Note that on some systems you might need to sub 'pip3' for 'pip' in the following commands.

wget: downloading data  -> pip install wget
pandas: data tables  -> pip install pandas
numpy: mathematics  -> pip install numpy
pint: Unit Conversion  -> pip install pint

3 Usage
usage: RD-80Downloader.py [-h] -f <filename> [-n NDAYS] [-s <Strt-date>] [-e <Stp-date>]

Scrape/Concatenate EOAS RD-80 Acoustic Disdrometer Data

optional arguments:
-h, --help show this help message and exit
-f <filename>, --filename <filename>
  Filename of output file
-n NDAYS, --ndays NDAYS
  number of days of records to concatenate
-s <Strt-date>, --start-date <Strt-date>
  Date String in ISO format "YYYY-MM-DD"
-e <Stp-date>, --end-date <Stp-date>
  Date String in ISO format "YYYY-MM-DD"

4 Examples

# Get all data from 2021-05-01 to today
python RD-80Downloader.py -s 2021-05-01 -f output.csv

# Get all data from 2021-05-01 to 2021-06-25
python RD-80Downloader.py -s 2021-05-01 -e 2021-06-25 -f output.csv

# Get following 7 days of data starting from 2021-05-01
python RD-80Downloader.py -s 2021-05-01 -n 7 -f output.csv

# Get past 7 days of data starting from 2021-05-01
python RD-80Downloader.py -e 2021-05-01 -n 7 -f output.csv

# Get all data from the last 45 days
python RD-80Downloader.py -n 45 -f output.csv