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# Download data from *Weather Underground*

## 1.1 Extract Dutch stations

The script *wunderground\_dump\_stationid.py* parses the Weather Underground website to find all stations in the Netherlands. For each station found, the following variables are extracted: *station id*, *neighborhood*, *city*, *station type*, and *location* (latitude, longitude, height). The zipcode of the station location is extracted using the api of Google Maps. The extracted data is saved to a csv file.

The script takes one (optional) argument, which is the name of the output csv file. The default name of the output csv file is *wunderground\_stations.csv* in the current working directory.

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**Program 1** *wunderground\_dump\_stationid.py*

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```
usage: wunderground_dump_stationid.py [-h] [-o OUTPUT]
```

Extract all Wunderground stations in the Netherlands and write the station names and locations to a csv file

optional arguments:

```
-h, --help            show this help message and exit
-o OUTPUT, --output OUTPUT
                        CSV output file [default: wunderground_stations.csv]
```

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## 1.2 Download Wunderground data

Downloading data from Weather Underground is performed using the script *wunderground\_getdata.py*. A station id can be supplied to the script, using the (-s, -stationid) switch, to download data for a single station. Alternatively, the csv file that results from the *wunderground\_dump\_stationid.py* script can be supplied to the script using the (-c, -csvfile) switch to download data for all stations in the csv file.

Other relevant arguments to the script are:

- (-b, -startyear) and (-e, -endyear): Defines the begin and end of the period that data is downloaded for.
- (-k, -keep): Use the argument switch to keep already downloaded data. If the argument switch is not used existing data is overwritten.

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**Program 2** wunderground\_getdata.py

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```
usage: wunderground_getdata.py [-h] [-o OUTPUTDIR] [-b STARTYEAR] [-e ENDYEAR]
                                [-s STATIONID] [-c CSVFILE] [-k]
                                [-l {debug,info,warning,critical,error}]
```

Combine csv files weather underground in one output file

optional arguments:

```
-h, --help                show this help message and exit
-o OUTPUTDIR, --outputdir OUTPUTDIR
                           Data output directory
-b STARTYEAR, --startyear STARTYEAR
                           Start year
-e ENDYEAR, --endyear ENDYEAR
                           End year
-s STATIONID, --stationid STATIONID
                           Station id
-c CSVFILE, --csvfile CSVFILE
                           CSV data file
-k, --keep                Keep downloaded files
-l {debug,info,warning,critical,error}, --log {debug,info,warning,critical,error}
                           Log level
```

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