

0 Nahuelbuta weather station

The data file contains data from a weather station in Nahuelbuta.

- Read in the CSV file "data0_no_time.csv". (use `np.loadtxt()` and `delimiter=","`)
- Write a function that filters out the invalid values (-9999.0) from the data.
- Plot the first (air temperature in deg C) and second column (solar radiation $\frac{Watt}{m^2}$) in two separate plots.
- The time information is missing, try to figure out from what time period the data is.

1 Smoothing data

Load data from text, apply smoothing to the data (sliding window)

2 Min, Max, Mean

- Read in data from the user as input from the command line. If the user types "x" stop reading.
- Write a function that calculates the min, max and mean values from that input. The function should return a tuple (a, b, c) containing the three values
- Print the values at the end

3 Daily average

The data given is from one year of the weather station in Santa Gracia. There are 24 values per day (1 hour average).

- Read in the CSV file "data3.csv". (use `np.loadtxt()`, `delimiter=","` and `usecols=(1,2)`)
- Write a function that filters out the invalid values (-9999.0) from the data.
- Write a function that calculates the average for each day (average over 24 values).
- Plot the data: first column contains air temperature, second column contains air relative humidity.

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