W13_Verband-Energy-en-Tijd

January 12, 2021

0.1 Setup code

- imports
- inladen data Code door > Niels van Schaik 18150845

calculating consumption is van W12_featureselection_h28_SimpleDataset

[4]:
```
# Imports
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import sys
sys.path.insert(0,'/home/18150845/notebooks/zero/Imports:/')
import Load_data as ld #resample.mean()

# Inladen data
a_dict = {'energyHeatpump': [2],
          'smartMeter': [6,7],
          'solar' : [2,3]}

# Reading data from numpy files
house = ld.load(28,28,a_dict,16095065)
df = house[28]

# Calculating consumption
df = df.diff()
df['consumption_incl'] = df.apply(lambda x: x['smartMeter_6'] +␣
 ↪(x['solar_3']-x['solar_2'])-x['smartMeter_7'], axis=1)
df['consumption'] = df.apply(lambda x: x['smartMeter_6'] +␣
 ↪(x['solar_3']-x['solar_2'])-x['smartMeter_7'], axis=1)
df = df.dropna()
df = df.filter(['consumption']) #, 'consumption_incl', 'energyHeatpump_2']

# Resampling to an hour
data = df.resample('60min').sum()

# Simpel Plotje
%matplotlib notebook
```

```
data.plot()

# Print van de Dataframe
data
```

```
<IPython.core.display.Javascript object>
```

```
<IPython.core.display.HTML object>
```

[4]:

	consumption
2018-12-31 23:00:00	0.622
2019-01-01 00:00:00	0.402
2019-01-01 01:00:00	0.264
2019-01-01 02:00:00	0.163
2019-01-01 03:00:00	1.526
…	…
2019-12-31 18:00:00	0.918
2019-12-31 19:00:00	1.163
2019-12-31 20:00:00	1.315
2019-12-31 21:00:00	0.701
2019-12-31 22:00:00	1.179

[8760 rows x 1 columns]

[5]:
```
# Define the threshold
# de Threshold = mean*1.3 + std*1.01
tempdf = pd.DataFrame(index = data.index)
for i in range(-6,6+1):
    tempdf[str(i)] = data['consumption'].shift(periods = i, freq = 'H')
tempdf['Threshold'] = (tempdf.mean(axis = 1, skipna = True) * 1.30) + (tempdf.
 ↪std(axis = 1, skipna = True) * 1.01)
data.loc[data['consumption'] < tempdf['Threshold'], 'Is_Peak'] = 0
data.loc[data['consumption'] >= tempdf['Threshold'], 'Is_Peak'] = 1
#tot hier copieren, vergeet niet data te veranderen naar de df waar de data in␣
 ↪zit
%matplotlib notebook
data.plot()
```

```
<IPython.core.display.Javascript object>
```

```
<IPython.core.display.HTML object>
```

[5]:
```
<AxesSubplot:>
```

[ ]:
```

```