Project Work Modul 3 «electricity price forecasting switzerland (Day Ahead)»

Topic: **Electricity price time series forecasting for switzerland**
This work evaluates different multi-step, multi-output neuronal network models aiming at forecasting day-ahead electricity prices of Switzerland.

Following files and comments:

- Notebook: Learning_on_time_series_VII_E-Prices.ipynb
  Use on Colab recommended (with runtime type: GPU) and data loading is implemented to use with own google drive.

- Data is located in subfolder "Data": data is loaded by 4 csv files - 4 different time intervals of same data. Only one time window is used at a runtime.
  df_fit_data_2019-01-01_2021-03-12_noDrop.csv
  df_fit_data_2019-10-01_2021-03-12_noDrop.csv
  df_fit_data_2020-01-01_2021-03-12_noDrop.csv
  df_fit_data_2020-04-01_2021-03-12_noDrop.csv
  The data is originally loaded by a Python API Implementation (package entsoe-py) developed for the Restful API of Transparency Plattform of ENTSO-E.
  find it on GitHub: https://github.com/EnergieID/entsoe-py
  For convenience the data used in the notebook is provided here as csv file output.

  Data has been corrected so that continuous timeseries over whole time intervals are available. Corrections of missing or incorrect data points (at feature level) is done by applying mean values (at feature level) and taking also into account to take the mean only over hourly index (of time serie) to correct. As a consequence the data files are named with the extension "noDrop". About 10% of data time indices counted at hourly time level had to be corrected - missing values almost ever only in one of the feature values.

  It is recommended to load it from google drive.
  link "how to load":
  https://towardsdatascience.com/3-ways-to-load-csv-files-into-colab-7c14fcbdcb92
  (implemented in the notebook and recommended use is way Nr. 3)

- Additional Documentation: Documentation_to_results.pdf
  shows different results on "Multi-Step – Multi-Output" Models and the way the optimized forecasting parameters in a "story telling manner".