Seminar Topic "Energy Informatics"

Deep Learning for Energy Time Series

Deep Learning is one major trend of the last years in machine learning. However, the usefulness for the analysis of energy time series is still an open question. Therefore, it is interesting to explore the opportunities Deep Learning offers in the context of energy time series, for example to make better or more complex load forecasts.

This seminar paper should introduce to load forecasting as one application of Deep Learning for energy time series.

Introductory Literature:

Marino, Daniel L., Kasun Amarasinghe, and Milos Manic. "Building energy load forecasting using deep neural networks." Industrial Electronics Society, IECON 2016-42nd Annual Conference of the IEEE. IEEE, 2016.

Mocanu, Elena, et al. "Deep learning for estimating building energy consumption." *Sustainable Energy, Grids and Networks* 6 (2016): 91-99.

Requirements:
- Knowledge of (or motivation to work with) R or Python
- Motivation to work with data and deep learning algorithms
- Some basic statistics knowledge would be an advantage

If you are interested in taking part in the seminar, please write an email to nicole.ludwig@kit.edu or marian.turowsk@kit.edu.

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