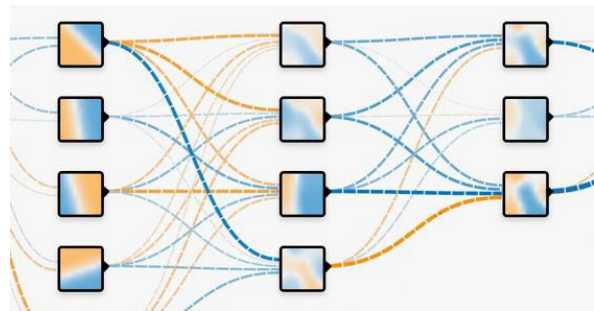
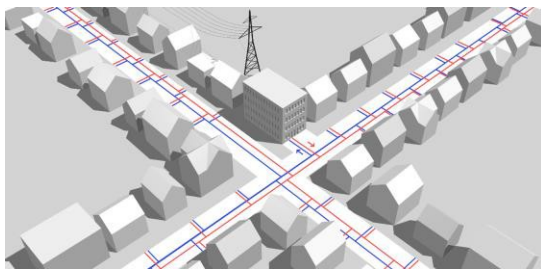


Master Thesis

Load Forecasting using an ensemble of AI based forecasters



InterFlex is a Horizon 2020 project and investigates the INTERactions between FLEXibilities provided by energy market players and the distribution grid, with a particularly focus on energy storage, smart charging of electric vehicles, demand response, islanding, grid automation and the integration of different energy carriers (gas, heat, electricity).

One of the challenges to address is load forecasting for which various machine learning techniques find increasing popularity. The aim of this thesis is to leverage the strength of different machine learning / AI-based forecasting models and combine them into one ensemble forecasting model. All of the base models exist from previous works. They first need to be evaluated for their strength and edge case behavior to then be combined into the ensemble forecaster.

Prerequisites: General python skills, especially SciPy, NumPy and Pandas
Plus*: Knowledge of Tensorflow, Keras, SK-Learn or PyTorch

* skills can also be acquired during the thesis

Keywords: ensemble learning, load forecasting, AI, machine learning

For further information, please contact:

Henning Wilms, M.Sc.
Tel. +49-151-7410 5928
hwilms@eonerc.rwth-aachen.de

ACS | Institute for Automation of Complex Power Systems
ERC | E.ON Energy Research Center
RWTH Aachen University
Mathieustr. 30, 52074 Aachen, Germany