Comparison of Using SVMs and ANNs for Smart Grid Load Forecasting

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Abstract. Load forecasting plays a very important role in building out the smart grid, and attracts the attention of not only the researchers and engineers, but also governments. The classical method for load forecasting is to use artificial neural networks (ANN). Recently the use of support vector machines (SVM) has emerged as a hot research topic for load forecasting. Based on the results from the experiments, a comparison between different internal ANN algorithms as well as the comparison between ANN itself and SVM is discussed, and the merits of each approach described. Also, how much effect the factors like weather and type of day have for the load prediction is analyzed.