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# Literature Review

## Introduction

In this literature review we will be analyzing the article put forward by Stefan Hosein. This literature review discusses: factors for STLF and STFL methods. A series of articles will be used to evaluate the integrity of Stefan Hosein’s article.

## Factors for Short-Term Load Forecasting

In 2005, author Eugene Feinberg and Genethliou Dora wrote a chapter entitled “Load Forecasting” in the book “*Applied mathematics for restructured electric power systems”*. The chapter was aimed at the importance of load forecasting in the electric industry and its applications towards energy purchasing and infrastructure development, among other things.

Feinberg and Genethliou outlines several factors that need to be considered for short-term load forecasting. Some of the factors they mentioned were: time, weather and customer class. They described time factors to include: time of year, day of the week, hour of the day, differences in weekends and weekdays. They also described weather conditions to be the most influential towards the energy load and include factors like: temperature and humidity. Stefan Hosein (2017) in his article, “Load Forecasting using Deep Neural Networks”, claims the dataset uses: hourly samples, electrical load readings per time interval, average per 24 hours, average per week, day of the week, hour of the day, if it is a weekend, if it is a holiday, temperature and humidity. In comparing these practices by Feinberg and Genethliou to Stefan Hosein, it was observed that Stefan Hosein chose the ideal features for his dataset and stayed true to the specifications for STLF.

## Parametric and Non-Parametric Short-Term Load Forecasting Methods

<ref 2> spoke about short-term load forecasting methods and broadly described them as parametric and non-parametric. They said parametric methods are: regression and time series, and non-parametric methods are: artificial intelligence models like ANN, Fuzzy logic and expert systems. <sir> made use of both types of forecasting methods in his paper, however, imo, instead of using a weighted moving average model, he could/should have used a box-jenkins ARIMA model instead, or alongside the other parametric methods. I say this because ARIMA is more accurate and relevant for the features chosen when compared to WMA. The drawback of this is the computation time (as stated by <ref2>), but <sir> already claimed that he accounted for this when using the DNN (non-parametric) model. This makes his paper seem biased towards the non-parametric methods since he does not give the parametric methods a proper “fighting chance”.

## Conclusion

## Word Counts

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# References

1. Feinberg, Eugene A., and Dora Genethliou. "Load forecasting." In *Applied mathematics for restructured electric power systems*, pp. 269-285. Springer, Boston, MA, 2005.
2. Gs, Anitha & Shiruru, Kuldeep. (2016). SHORT TERM LOAD FORECASTING METHODS, A COMPARATIVE STUDY. International Journal of Advance Research and Innovative Ideas in Education. 1. 31-37.