

**SHORT-TERM LOAD FORECASTING USING AR AND ARIMA BOX
JENKINS MODEL**

**This is represented in partial fulfillment for the award of the Bachelor of
Electrical Engineering (Hons)
UNIVERSITI TEKNOLOGI MARA**



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ACKNOWLEDGEMENT

In the name of Allah S.W.T. the merciful, beneficent, and the almighty one, praise to him endowment for allowing me to complete this final year project. Alhamdulillah, grateful to Allah for giving me the strength to manage this final year thesis completely beside gaining valuable experiences and knowledge throughout completing this thesis, this experiences and knowledge may assist me to develop my personal skill in the future.

Special thanks are addressed to my supervisor, Dr. Muhammad Murtadha Bin Othman for guiding me during completing this report. For his willingness to advice, motivate, teach, and his patience, a special debt of gratitude towards him.

My beloved father and mother, brothers and sister, thank you so much. Without their continue support and encouragement, I could not have gone further than where I have. To my fiancée, Nazliah, thank you so much for always is being there for me.

Not forgetting my friends for their opinion and advice, appreciation to all my friends. Lastly to the names that I forgot to mention, you know who you are, thank you so much from the bottom of my heart.

May Allah repay all your kindness...

ABSTRACT

This paper presents an overview research on the short term load forecasting (STLF) in power system field. The method used in this approach was based on autoregressive (AR) Box Jenkins model. AR was mathematical model in solving iteration problem. The AR model was selected based on the behavior of the sample autocorrelation (SAC) and sample partial autocorrelation (SPAC). Furthermore the adequacy of the AR model was determined by Ljung Box test. The (AR) Box Jenkins model then is compared with the ARIMA Box Jenkins model to determine the performance of both models in assessment of STLF. The main purpose was to study the important of load forecasting. Whereby from the load forecasting analysis we can estimate on how many generation plants that have to turn on in certain period time, and switching.

Keywords:

Short-term load forecasting (STLF), autoregressive Box Jenkins Model(AR), autoregressive integrated moving average Box Jenkins Model(ARIMA), sample autocorrelation(SAC), sample partial autocorrelation(SPAC), and Ljung-box test.

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