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E-info for
Household Electricity Consumption in Sri Lanka
Pilot study for Western Province

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requirement of the Degree of MSc in Information Technology
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the University of Moratuwa”

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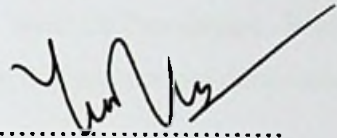
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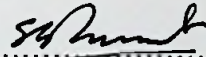
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Abstract

Motivated by the increasing accessibility of technology, more and more spatial data are being made digitally available. How to extract the valuable knowledge from these large (spatial) databases is becoming increasingly important to businesses as well. It is essential to be able to analyse and utilize these large datasets, convert them into useful knowledge, and transmit them through GIS-enabled instruments and the Internet so that the key information can be conveyed to business decision-makers effectively.

The main goal of this study is to develop a web based system which could be used for identify seasonal consumption patterns of household electricity consumption in each Grama Niladhari (GN) divisions across Sri Lanka. This tool can be developed to improve meter reader efficiency and will be a valuable planning tool in CEB and SEA.

The study used econometric simulation for analysis key factors affecting household electricity demand. While the system is fed with the real time electricity consumption at the household level, it keeps on comparing with the maximum forecasted value that could generate from the hybrid econometric model. If the consumption exceed the demand the system would help to find the misused location which is visualised on the map.

It is recommended, in order to ensure effective & precise execution of the system further intervention should be initiated to track the real time electricity consumption in household level. This also helps to decide the total production required for the country in specific time period in the calendar year. Therefore, it helps to preserve time, cost and the resources used for the electricity production in the country which could be used for economic development.

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List of Abbreviations

AFIRS	Automated Feature of Information Retrieval System
CEB	Ceylon Electricity Board
GN	Grama Niladhari (Village administrative officer)
GWh	Giga Watts per hour
<i>E-info</i>	Electricity Consumption Information System
IEA	International Energy Agency
LECO	Lanka Electric Company (Pvt) Ltd
LPG	Liquid Petroleum Gas
SEA	Sustainable Energy Authority