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Feasible Solution for Newspaper Circulation and Sales Forecasting in Sri Lankan Newspaper Industry

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Dissertation submitted to the Faculty of Information Technology,
University of Moratuwa, Sri Lanka for the partial fulfillment of the requirements of
the Master of Science in Information Technology.

April 2016

University of Moratuwa



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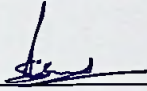
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Declaration

I declare that this thesis is my own work and has not been submitted in any form for another degree or diploma at any university or other institution of tertiary education. Information derived from the published or unpublished work of others has been acknowledged in the text and a list of references is given.

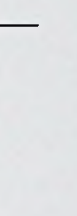
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Dedication

I would dedicate this thesis to my beloved parents who have never failed to give me a tremendous support, for giving all not only throughout my project but also throughout my life. As well they teach me that even the largest task can be accomplished if it is done one step at a time.

Acknowledgement

I wish to express my eternally grateful and gratitude to my project supervisor Dr. Lochandaka Ranathunga who untiringly shared his knowledge, precious guidance, encouragement, advices and help given to complete the project successfully. Also I am thank to Prof A.S Karunananda and my project coordinator Mr. Saminda Premarathne who gave me guidance and advices to complete the project successfully.

I am also grateful to Air Vise Marshal Lal Perera (Deputy General Manager Sales and Marketing - The Associated Newspapers of Ceylon Ltd) and his staff, Mr. Kapila Kumara (Head of Information Technology- The Associated Newspapers of Ceylon Ltd) and his staff who spared their valuable time with me in sharing their knowledge and experience about Newspaper Circulation/Distribution Process.

Importantly I would like to thank my parents for the encouragement and undying support not only throughout my project but also throughout my life.

Finally, the support of University of Moratuwa is also sincerely acknowledged.

Thank you.

Abstract

Newspaper is a one of the key mass media news provider in Sri Lankan society. Newspaper is perishable item that valued only one day. Therefore, newspaper publishing companies need to print accurate quantity of copies of newspapers and deliver the sales point on-time, maintain the minimum returns without oversupply or shortage supply to the market. By this newspaper publishers can enjoy high profitability and reduce unnecessary publishing cost. Therefore, companies need smooth circulation process and accurate newspaper forecasting solution. This research project main objective is to introduce a newspaper circulation system and sales forecasting system in Sri Lankan newspaper industry. Research introduced a web base solution for handling newspaper circulation that include newspaper issuing, returns handling and mode of payment. Circulation system developed PHP scripting language and MySQL used for database. Developing this Circulation system research is used in Waterfall model. This research develop a newspaper sales forecasting solution by using data mining techniques such as classification, prediction and time series regression techniques which will be used to analyse and forecast newspaper sales time dependent data points such as paper wise forecasting in next month issue, customer wise issue, district wise issue, city wise issue etc; on the other hand, newspaper company can identify movement of newspaper buyers between agencies, seasonal changes in demand between newspapers and identify sales patterns regarding to agencies, newspapers, district and nationally wise ; This research use popular Weka (Waikato Environment for Knowledge Analysis) software for time series analysis and its allows to create forecasting models, evaluating and visualizing the results. Finally this research developed Newspaper circulation system that handles by the main circulation process. Evaluation of the sales forecasting this research identified the Linear Regression is most suitable method for forecasting the newspaper sales forecasting. However, Linear Regression and SMO Regression methods can be used for forecast city wise and agent wise newspaper sales, as well as this research identified the sales patterns that help to make management decision. By using this system Newspaper companies may reduce their unnecessary cost relating to Newspaper sales and distribution.

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