Analysis of Road Congestion based on Weather Conditions in Sri Lanka

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February 2019

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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 Degree of Science in Information Technology

February 2019

Declaration

I declare that this 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 Information derived from the published or unpublished work of others has been acknowledged in the text and a list of reference is given.

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Dedication

This Dissertation is dedicated to my loving parents for being part of me and encouraging me always by being my side.

Acknowledgement

First I express my heartfelt gratitude to my supervisor Mr. B.H Sudantha for his most valued guidance, commitment and kind support to make this research a success.

Also I sincerely thank Prof. Asoka S Karunananda who taught us all the research related document preparation which was a great support to manage all work with busy schedules.

It's my pleasure to thank Mr. Chaman Wijesiriwardena and all other Senior Lecturers, Lecturers, Instructors and staff members who helped us in many ways to successfully complete this research.

And also I sincerely thank Mrs. Chamari De Silva who taught me about rapid miner tool which was a great support me to do the analysis part of the research.

Then I would like to thank all the batch mates of MSc. In Information Technology batch 9 for their companionship and various kinds of support given throughout the program.

In addition, I would like to thank my work mates and friends for encouraging me with their support and best wishes.

Last but not least, my sincere thank goes to my beloved parents and specially Lasith Udara, for helping me to conduct this work without much stress and encouraging me to complete this research.

Abstract

Sri Lanka incurs a huge economic loss of around Rs.4 billion annually due to the road traffic congestion and air pollution with too many vehicles on a limited road network. According to the statistics a large number of Sri Lankans spend more time on the roads paying more fuel, as the number of vehicles on the roads are rapidly increasing and it takes longer to reach one's destination. Road congestion is increasing due to many reasons such as increase of vehicle population, lack of proper vehicle parking system near urban area, lack of well-maintained road network, weather condition, etc. There are many researches which is done to monitor the road congestion based on the vehicular data. And the lack of monitoring the traffic based on the weather condition is available in Sri Lanka.

This research is mainly focused on the weather condition and the traffic data. To collect the information, google maps data, open weather Map data and police report data is supposed to use. To find the correlation between classification of the traffic congestion and weather, data is analyzed. To predict the most relevant weather factor for the road congestion, data is analyzing.

Aim of the research is provide a best route to travelers. System is to be analyze how the change of weather affects increase of road condition and in future analyze to be done to find how traffic congestion affects the increase of accidents.

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