

Decision Support System for Road Traffic Violations

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 Information derived from the published or unpublished work of others has been acknowledged in the text and a list of reference is given.

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Abstract

Traffic violations frequently occur in Sri Lanka. The number of death and damages due to road accidents are increasing continuously. It can be reduced, on the one hand by educating people about road rules and giving knowledge in severity of road violations. It can be managed by introducing a well-defined traffic management system that can collect and analyze information accessible to authorized person. This cannot be fulfilled with the existing system. Because the current manual system is not efficient enough to implement fines or file court cases against road rule violators.

Each police station has a traffic division. ruled by a separate officer under main police station officer in charge. It provides various kind of services for the public community by coordinating related department ministry such as law department. In that case they want a good system for information sharing with each other departments. However it is difficult to share and update information using the current manual system. Road users such as pedestrians and drivers do not have a proper way to learn road rules and regulations. Even though books with road signs and regulations are available in book shops, most of them are not updated.

This research is divided into two parts. First part is introducing web based information systems for police traffic division and other related authorities because this type of system is easy to handle island wide. This system has five types of users. They are main admin, traffic police officer in charge, traffic police offices, law enforcement authority and road users. In this system it covers the all day to day activities in traffic unit, related authorities easy link, updating, searching information and generate island wide report and provide interface to violated drivers to pay their fine online. Road user can get information about road rules, road signs and information related to road traffic.

Second part in this research is analyses traffic violation using previous data from Tangalle, Galle, and Imaduwa police stations traffic violation data have been collected for this research. Currently data available in the book and data preprocessing has been done in the data extracting time. Then use Rapid Miner software further data preprocessing and identified violation pattern.

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