Universiti Teknologi MARA

Bus Driver Ethics Monitoring System Using Fuzzy Expert

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ABSTRACT

The rate of bus crash is still increasing in Malaysia. Although, the technology such as Global Positioning System have been implemented and the system can monitor the movement and speed of bus but still less efficient in reducing the rate of bus crash. This problem occurs is because of the Bus Company still cannot take action and they don't know what actually happen during on the travelling before the bus crash. The passengers would feel unsafe while the driver is driving over the speed limit on highways. Therefore, the objective is to develop the system that can identify the category of driver ethics. The passengers can report to the Bus Company by using the apps through their mobile phone if they face the dangerous situation such as the bus drivers are driving recklessly. The system evaluates the category of bus driver ethics will be used by the Bus Company. The Bus Company will use the data that have been received from database server. The data will be used which is the age, experienced of driver, the speed, the weather condition, the pavement condition, and the traffic condition. Then these data will be evaluated by using Fuzzy Expert System technique. The result which is the category of driver ethics will be considered to take the action if the driver ethic is good or not. This result will be taking based on majority. In conclusion, this system can convenient the Bus Company to identify the bus driver ethics that have been receive the report data from passengers. The Bus Company can take action early to make sure that the bus driver are not driving over the speed limit and alert the bus driver to drive carefully.

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CHAPTER 1

INTRODUCTION

This chapter provides all components of this project are presented. The main components of the project, including the background study, the problem statement, the research question, the project objective, the project scope, and the significance of the project. This chapter ends by summarizing all components of this project.

1.1 Background Study

The bus is categorized as heavy vehicle. The heavy vehicles are not allowed to drive over the speed limit. It is very dangerous to the driver and passengers. The heavy vehicles are allowed to drive in the range 80km to 90km on highways. It is safe driving and legal on the roads for heavy vehicles. The heavy vehicles can drive at normal speed on left lane so that the bus in safe condition.

Land public transport commission (SPAD) asserted to the Bus Company to install global positioning system (GPS) on each bus because it is a good ways to reduce the rate of bus crash (malaymailonline, 2014). The installation of GPS on the bus is very important to monitor the bus travelling on highways.

Only 68% of bus companies are applying the technology such as GPS on the express bus. In fact, “the technology such as GPS used by the bus company to monitor the speed of the bus so that Bus Company can take action to drivers who are not adhering to the rules and speed limit” (Khoo, 2013) . This system is a good way to facilitate the bus company to handling drivers who are driving over the speed limit.

The bus monitoring system is a good method which it can monitor the movement bus to travel to the destination (Baldwin *et al.*, 2004). This system