UNIVERSITI TEKNOLOGI MARA

INVESTIGATION OF ROAD TRAFFIC ACCIDENTS IN BANDAR KUALA TERENGGANU BETWEEN 2014 TO 2016 USING GEOGRAPHIC INFORMATION SYSTEM (GIS)

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AUTHOR'S DECLARATION

I declare that the work in this dissertation was carried out in accordance with the regulation of Universiti Teknologi MARA. It is original and is the result of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non- academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Under Graduate, Universiti Teknologi MARA, Regulating the conduct of my study and research.

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ABSTRACT

According to road accident statistics recorded by the Unit Perancangan Negeri Terengganu (UPENT), the number of road accidents in Kuala Terengganu increases year by year. The number of reported cases in year 2014 is 9383, while in year 2015 is 10381 that show the increase of road traffic cases. In year 2016, the number of road traffic accident increase until reach 10793 cases that has been reported. The aim of this research is to investigate the road traffic accidents cases occurred in Bandar Kuala Terengganu in year 2014 to 2016. The methodology for this study performing of geo-reference and geo-coding of the database. After that, hotspot analysis by using Kernel Density Estimation (KDE) technique to find the most affected area of accident. After that, regression analysis by using Ordinary Least Square (OLS) tools to find the relationship of the factors that most contribute accident cases. This research is based on the investigation of traffic accident and the result of this study will show the hotspot map that will show the most affected area that called hotspot area. The output for the relationship of the road traffic accident will show in the graph form. This study is significant in order to give the information to the Police Traffic Department and Jabatan Kerja Raya (JKR) and this department can take this information for monitoring the accidents hotspots to prevent the injuries and death to the road users.

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