

UNIVERSITI TEKNOLOGI MARA

**INVESTIGATION OF SPATIAL TEMPORAL
ANALYSIS ON ACCIDENT BASE ON TRAFFIC
CONGESTION PATTERN**

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Thesis submitted in fulfillment of the requirements for the award of
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AUTHOR'S DECLARATION

I declare that the work in this thesis/dissertation was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results 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

Traffic congestion were occur when there are many vehicle for available road space. Due to traffic congestion, that cause delay movement, stress and waste of time. In Korea Highways, traffic congestion spots were define where vehicle speed fall below 30 km/h or continues longer than 2 hours a day. Hence, this study was study to investigate the spatial temporal analysis on accident base on traffic congestion pattern. The objective in this study which is to identify traffic congestion and accident distribution, to study spatial temporal pattern of traffic congestion and to analyze the traffic congestion factor on accident. All the objective achieved by using GIS application. The method that was used in this study is hotspot analysis and geostatistical analysis (time slider). This study were use secondary data that accident data obtain from Polis Diraja Malaysia (PDRM) and traffic volume which is level of services (LOS) data obtain from Jabatan Kerja Raya (JKR) Kedah.. The result in this study was conducted to produce a map of spatial temporal analysis on accident base on traffic congestion pattern in Kedah state. This result found that the accident cases in Kedah really effect of level of services (LOS) of the road. So, this result can help the police department and JKR to making a better analysis on the accident and traffic congestion occur where the safety of community can be improved.

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