

UNIVERSITI TEKNOLOGI MARA

**AN ANALYSIS OF CRIME PATTERN USING GIS
APPROACH**

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Thesis submitted in fulfillment
of the requirements for the degree of
Bachelor of Surveying Science and Geomatics (Hons)

Faculty of Architecture, Planning and Surveying

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AUTHOR'S DECLARATION

I declare that the work in this thesis 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 Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.

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ABSTRACT

Crime is act harmful not only to some individual but also to community, society or state. The fear on crime and insecurity are the reality in life oppose. This paper research indicates the relationship of criminal activities with land use and their implications on the society at both the relative. The aim of this study is to review spatial analysis of crime pattern at Montgomery county Maryland on year 2016 and 2017. There are four type of crime has been classified based on the crime cases reported on year 2016 and 2017. By using GIS (Geographical Information System), spatial analyst tools with density method and spatial statistic tool with hotspot is performed in order to determine the crime pattern. The study then produces the map distribution of crime on year 2016 and 2017. Besides that, the hotspot and kernel density estimation map to determine the crime pattern. The overall finding from this research that there have large changes on the crime pattern between year 2016 and 2017. For the both method of hotspot and kernel density estimation is the best method used to identify and determine the crime pattern in Montgomery and also for the general understanding on crime pattern.. In conclusion, this research paper suggests that the application and integration of GIS techniques could assist the law enforcement in monitoring potential crime location and improvement in internal management of information in wide use of geographic information system (GIS).

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