Property and Violent Crimes Data Analysis Using an Analytical Dashboard.

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ABSTRACT

One of the main reasons a person commits a crime is the narrowness of life. However, this is not the best way to get on with life. A crime is an illegal activity or action for which people can be punished by law. Our country, Malaysia, does not have such a crime dashboard that people can view it and play with the data. The only report that people can review about crimes is the yearly report by The Department of Statistic Malaysia, but users cannot interact with it like a dashboard. With the current techniques, data visualization is presented by 2-dimension graph only. Using 2-dimensional graphs makes it hard for the users to get the full overview of the data. It is hard to see the trend of crime using that technique. The objective of this project is to analyze the requirements for data analysis of property and violent crime cases in Malaysia, design and develop analytical dashboard based on property and violent crime cases in Malaysia, and to evaluate the analytical dashboard for analysis of trends in property and violent crime cases in Malaysia. The dashboard prototype has been developed using Balsamiq wireframe in order to give an overview of the web application interfaces. The data dashboard has been developed using Microsoft Power BI which allows users to search for data, convert, visualize, and share the reports and dashboards that users create with other users in the same or different departments or organizations, as well as the general public. The end result of this project is creating a data dashboard that can be accessed by end-users like the public and for practitioners who may use this report of the project to develop similar projects. The usability testing from users has been conducted to ensure the objectives of this project will be achieved.

Keywords: Crimes, Data analysis, Analytical dashboard, Balsamiq, Microsoft Power BI, Usability testing