

UNIVERSITI TEKNOLOGI MARA

**INTEGRATING VISUALIZATION
TECHNIQUE IN JUVENILE
DELINQUENCY RECOMMENDATION
EXPERT SYSTEM (JDRES)
PROTOTYPE**

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STUDENT DECLARATION

I certify that this thesis and the project to which it refers is the product of my own work and that any idea or quotation from the work of other people, published or otherwise are fully acknowledge in accordance with the standard referring practices of the discipline.

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ABSTRACT

Visualization techniques are effective communications that are extremely useful in complex and changing environments. This technique assist human to make sense of data and communicate the information thus addressing life complexity. In order to read mountainous data sources, Jabatan Kebajikan Malaysia (JKM) management needs to use data visualization approach to monitor their business procedures. Therefore, the research project aims to integrate visualization technique to Juvenile Delinquency Recommendation System (JDRES) prototype. The methodology used in this project is Software Development Life Cycle (SDLC) which consists of planning phase, information gathering and analysis phase, requirement elicitations phase and development phase. The significance of using visualization technique to represent the impact of the correctional programs allow to represent, explore, analyse and gain insight quickly the importance of the programs on juvenile delinquencies. Well-designed visualization approach allows management to gain quickly insights into the important data. The effectiveness of the prototype was analysed using usability test. The result shows the usability of the visualization technique in informing end users the impact of correctional programs. The used of visualization technique in JDRES enable information on the performance of correctional programs to be easily understood by the automatics persons.

Keywords: *Visualization Technique, Visualization Approaches*

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