

UNIVERSITI TEKNOLOGI MARA

**PARALLEL COORDINATES
VISUALIZATION OF SURVEY DATA**

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ABSTRACT

Parallel coordinates visualization has emerged as a potent method for analyzing high-dimensional survey data, enabling a comprehensive exploration of intricate relationships and patterns between multiple variables simultaneously. The proposed web-based application aims to harness the power of parallel coordinates to enhance survey data analysis, providing an efficient data exploration tool. However, the current limitations of traditional survey data visualization tools hinder the effective exploration of relationships within the data. To overcome these challenges, the waterfall model was followed during the development of the web-based application, ensuring thorough testing and validation of the system's functionality and usability. As a result, this system significantly aids in the easy analysis of survey data, offering a user-friendly and functional interface. The application's ease of use is further supported by an impressive System Usability Scale (SUS) score of 86.8%, demonstrating its effectiveness and acceptance among users. With its ability to provide deeper insights and improved data understanding, the adoption of parallel coordinates presents promising opportunities to revolutionize survey data analysis, contributing to enhanced decision-making and data exploration. By empowering users to explore their survey data in an interactive and visual manner, the web-based application enhances the efficiency of data analysis, leading to more informed insights and research outcomes. However, it is essential to acknowledge the significance of using well-structured and pre-processed datasets to ensure accurate and reliable visualizations. In conclusion, the integration of parallel coordinates and the waterfall model in the proposed web-based application offers an innovative and powerful solution to address the limitations of traditional survey data visualization tools, empowering users with a more efficient and insightful approach to survey data analysis.

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