

UNIVERSITI TEKNOLOGI MARA

**SALES PREDICTION FOR MEDIA PLATFORMS
ADVERTISING
EXPENDITURE USING LINEAR REGRESSION**

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ABSTRACT

Sales Prediction in Media Platform Advertising Expenditure Using Linear Regression is a critical research endeavor addressing the challenges associated with forecasting sales in the context of media platform advertising expenditure. The study focuses on the application of the Linear Regression algorithm to predict sales outcomes based on advertising spending patterns. Accurate sales predictions are essential for businesses to optimize their advertising strategies and maximize return on investment. The primary goal of this research is to develop a robust prediction system capable of aiding businesses in the media industry by providing insights into potential sales outcomes. Early and accurate sales predictions can significantly impact decision-making processes, allowing organizations to allocate resources effectively and enhance overall marketing strategies. The methodology employed in this project involves the implementation of the Linear Regression algorithm, a statistical modeling technique that analyzes the relationship between advertising expenditure and sales. The algorithm calculates a linear equation that represents the best-fit line through the data points, enabling the prediction of future sales based on advertising investment. Throughout the research, three key objectives were achieved: identifying the requirements for sales prediction in media platform advertising using Linear Regression, developing a prototype of the sales prediction system based on Linear Regression, and evaluating the accuracy of the algorithm in predicting sales outcomes. The project progressed through various phases, including Preliminary Study, System Design, Implementation and Development, and Testing and Evaluation. The developed sales prediction system demonstrated a commendable accuracy level of 99%. To further enhance the system's performance, future work could focus on refining data preprocessing techniques and incorporating a comprehensive database. In conclusion, this research contributes to the advancement of sales prediction methodologies in the media industry, offering businesses a valuable tool to optimize their advertising strategies and improve decision-making processes. The success of the project underscores the significance of leveraging machine learning algorithms, specifically Linear Regression, for accurate and timely sales predictions in the dynamic landscape of media platform advertising.

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