

UNIVERSITI TEKNOLOGI MARA

**SALES PREDICTION OF
BUBBLEBEE USING PREDICTIVE
ANALYTICS**

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ABSTRACT

Food industry often facing challenge to stay in market where it can be curb by forecasting sales of the company. This study focuses on BubbleBee, a Malaysia-based food and beverage company that faces challenges in sales prediction due to manual reporting, human errors, and limited insights into customer purchasing patterns. The aim of the project was to develop a sales prediction dashboard using predictive analytics. Using the CRISP-DM methodology, three objectives were achieved which are identifying current business processes and problems, implementing predictive models, and visualizing the predictions through a dashboard. Random Forest, Random Tree, and REP Tree models were tested, Random Forest showing the best performance with highest correlation coefficient = 0.9514 and lowest for MAE, RMSE, RAE and RRSE which is 90.9897, 159.1296, 35.3763%, and 46.3614% respectively. The 80:20 split further confirmed its accuracy which achieved 0.9474 for correlation coefficient 76.2784 for MAE and 146.54 for RMSE. A Power BI dashboard was created to present actual and predicted sales and was positively evaluated by the expert and manager for being user-friendly, visually clear, and helpful for planning while suggested some minor improvements such as the standardization of fonts and colours. The findings suggest that predictive analytics can reduce human error, improve decision-making, and support data-driven planning for small businesses. Future improvements should include collecting more complete data and using a larger dataset to improve accuracy and support better business decisions.

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