UNIVERSITI TEKNOLOGI MARA

SENTIMENT ANALYSIS OF CUSTOMER REVIEWS FOR KONDA KONDI CAFÉ & BISTRO

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ABSTRACT

This project presents the development of a sentiment analysis system to analyze customer reviews for Konda-Kondi Café & Bistro. The primary goal is to classify sentiments into positive, negative, or neutral categories to support business insights and improve decision-making with the help of natural language processing (NLP) as well as machine learning in this project. Following the CRISP-DM methodology, the researcher collected 600 customer reviews from social media platforms such as Facebook, Instagram, TikTok, and Google Reviews through web scraping. The data was pre-processed using tokenization, stop-word removal, and stemming techniques to ensure quality inputs. Machine learning algorithms such as Support Vector Machine (SVM), Naïve Bayes (NB), and Decision Tree (DT) were applied using RapidMiner to build classification models. The SVM model achieved the highest accuracy of 89% with an 80:20 data split. The researcher also compared lexicon-based methods, such as VADER and SentiWordNet. The researcher deployed the final results through an interactive Power BI dashboard to present sentiment insights in a user-friendly visual format. Despite challenges such as data imbalance and noisy text, the project successfully demonstrates sentiment analysis's usefulness in enhancing small business customer experience strategies. For future work, the project can be improved by collecting more reviews over time, using real-time data, and applying deep learning models like LSTM for better understanding of context and sarcasm.

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