UNIVERSITI TEKNOLOGI MARA

CLASSIFICATION AND VISUALIZATION OF MALAYSIAN FAST FOOD RESTAURANT CHAIN BASED ON TWITTER SENTIMENT ANALYSIS

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ABSTRACT

Social media refers to a computer-based technology where users may create online communities to share ideas, opinions, and thoughts. Due to the transparency of social media, consumers are more likely to express their thoughts about a product on social media instead of providing direct feedback to the company. Fast food has become increasingly popular in recent years due to its affordability, tastiness, and convenience. However, there is currently no dedicated platform for customers to access reviews for all fast food restaurants in Malaysia. Customers may also face the challenge of time-consuming processes when trying to read online reviews. Based on these challenges, the goals of this project are to design a web system that can visualize online reviews of Malaysian fast food restaurants using Twitter sentiment analysis. This project uses an algorithm called Naïve Bayes and the visualization is aided by the Plotly library in Python. The methodology used in this project is known as the Modified Waterfall Model, which consists of four primary phases: requirement analysis, design, implementation, and testing. Initially, the data was pre-processed, followed by the development, and testing of a classifier model using real-world data. Functionality testing demonstrated that the system achieved prediction accuracies of 79.19% for English and 76.98% for Malay, based on training and testing data. The usability testing was conducted using System Usability Scale (SUS) and achieved an average final score of 93.13%. In conclusion, this project has developed a system that could benefit all fast food restaurants customers in Malaysia by providing an analysis of reviews. However, there are areas for improvement, such as expanding the system to include other social media platforms as data sources and training the model with a comprehensive dictionary of Malay slangs and common abbreviations.

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