

ABSTRACT

The Free Nutritious Meal Program (Makan Bergizi Gratis/MBG) has generated diverse public opinions that can be examined through sentiment analysis. This study aims to compare the performance of Chi-Square and Information Gain feature selection methods for classifying public comments regarding the MBG program using the K-Nearest Neighbor (KNN) algorithm. Furthermore, the Wilcoxon Signed-Rank Test was employed to assess the significance of performance differences between the compared models. The dataset consisted of TikTok comments related to the MBG program, which were processed through text preprocessing, lexicon-based sentiment labeling, and TF-IDF weighting. Model performance was evaluated using Stratified 10-Fold Cross-Validation by measuring accuracy, precision, recall, and F1-score. The experimental results indicate that the KNN model combined with Chi-Square feature selection achieved the highest accuracy of 77.79%, followed by Information Gain at 77.16%. The basic KNN model without feature selection obtained an accuracy of 76.67%. These results indicate that feature selection helps improve classification performance, but there were no statistically significant differences between the models tested.

Keywords: Sentiment Analysis, Free Nutritious Meals Program, KNN, Chi-Square, Information Gain.