

***Sentiment Analysis Of Public Opinion On The Free Nutritious Meal Program
Using The Support Vector Machine Method***

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ABSTRACT

This study aims to analyze public opinion sentiment toward the Free Nutritious Meal (MBG) program on social media X and to evaluate the performance of the Support Vector Machine (SVM) algorithm in classifying such opinions. Research data were collected through crawling using the keywords "MBG", "Makan Bergizi Gratis", and "Makan Siang Gratis" from July 6 to December 6, 2025. From the total data collected, 1,906 valid tweets were obtained and verified by a language expert. The analysis stages included text preprocessing (data cleaning, case folding, tokenizing, normalization, stopword removal, and stemming), word weighting using TF-IDF, and classification using SVM with the Radial Basis Function (RBF) kernel. Hyperparameter optimization was performed using Grid Search, obtaining optimal values of $C = 10$ and $\gamma = 0.1$. Model evaluation used K-Fold Cross validation ($K=5$) with an 80:20 data split ratio, yielding average accuracy of $93.29\% \pm 1.15\%$, precision $93.33\% \pm 1.15\%$, recall $93.29\% \pm 1.15\%$, and F1-Score $93.28\% \pm 1.16\%$. The system was implemented as a web-based dashboard using Streamlit, achieving a System Usability Scale (SUS) score of 75 ("Good"). Sentiment distribution revealed a dominance of negative opinions at 58.4% (1,113 data) concerning food safety incidents, budget management, and governance issues, while positive opinions at 41.6% (793 data) supported national nutrition improvement, economy impact, and long-term human resource investment.

Keywords: *Sentiment Analysis, Support Vector Machine, Free Nutritious Meal, Social Media X, TF-IDF.*