

ABSTRAK

Kusuma, Yoga Wahyu. 2026. Analisis Sentimen Opini Masyarakat Tentang Program Makan Bergizi Gratis (MBG) Di Platfrom X Menggunakan Metode Naïve Bayes Classifier. Tugas Akhir. Program Sarjana. Program Studi Teknik Informatika. Universitas Muhammadiyah Jember.

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Kebijakan Program Makan Bergizi Gratis (MBG) menuai berbagai respons publik di media sosial X. Penelitian ini bertujuan menganalisis sentimen masyarakat dan menguji pengaruh *Synthetic Minority Oversampling Technique* (SMOTE) pada performa algoritma *Multinomial Naïve Bayes*. Penelitian ini menggunakan 5.231 tweet hasil *scraping* yang melalui proses *preprocessing*, pelabelan oleh dua validator, pembobotan TF-IDF, dan pembagian data rasio 80:20. Pelatihan model memakai parameter $\alpha = 0,100$ dengan *evaluasi metrik akurasi, presisi, recall*, serta *F1-score*. Hasil analisis mendapati sentimen negatif mendominasi sebanyak 2.788 data (53,30%), disusul sentimen positif 1.320 data (25,23%), dan sentimen netral 1.123 data (21,47%). Tanpa SMOTE, model mencatat akurasi 64,57%, presisi 61,60%, recall 64,57%, dan F1-score 61,74%. Angka tersebut meningkat setelah penerapan SMOTE menjadi akurasi 65,71%, presisi 64,65%, recall 65,71%, dan F1-score 64,85%. Penelitian menyimpulkan bahwa SMOTE efektif meningkatkan akurasi klasifikasi *Multinomial Naïve Bayes*, sementara riset lanjutan disarankan menambah jumlah data dan memperpanjang rentang waktu pengambilan sampel agar hasil analisis semakin representatif.

Kata kunci: Analisis Sentimen, Multinomial Naïve Bayes, SMOTE, TF-IDF, Program Makan Bergizi Gratis.

ABSTRACT

Kusuma, Yoga Wahyu. 2026. Sentiment Analysis of Public Opinion on Free Nutritious Meal Program (MBG) on X Platform Using Naïve Bayes Classifier. Undergraduate Thesis. Bachelor Program. Informatics Engineering Study Program. Muhammadiyah University of Jember.

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The Free Nutritious Meal (MBG) program policy has garnered diverse public responses on social media X. This study aims to analyze public sentiment and examine the effect of the Synthetic Minority Oversampling Technique (SMOTE) on the performance of the Multinomial Naïve Bayes algorithm. The study utilized 5,231 tweets obtained via scraping, which underwent preprocessing, manual labeling by two validators, TF-IDF term weighting, and an 80:20 data split. The model was trained using the optimal parameter of $\alpha = 0.100$ and evaluated before and after SMOTE application on the training data using accuracy, precision, recall, and F1-score metrics. The analysis results indicate that public sentiment is dominated by negative sentiment at 2,788 tweets (53.30%), followed by positive sentiment at 1,320 tweets (25.23%), and neutral sentiment at 1,123 tweets (21.47%). The Multinomial Naïve Bayes model without SMOTE achieved an accuracy of 64.57%, precision of 61.60%, recall of 64.57%, and F1-score of 61.74%, which increased after applying SMOTE to an accuracy of 65.71%, precision of 64.65%, recall of 65.71%, and F1-score of 64.85%. The study concludes that implementing SMOTE effectively enhances the performance of Multinomial Naïve Bayes in classifying public sentiment toward the Free Nutritious Meal program. Future research is recommended to utilize a larger volume of data with an extended data collection period to ensure more representative sentiment analysis results.

Keywords: Sentiment Analysis, Multinomial Naïve Bayes, SMOTE, Free Nutritious Meal, Social Media X