# ABSTRAK

Dandy Tri Prasetyo. 2026. Analisis Sentimen Publik Terhadap Polemik Kebijakan Pemerintah Makan Siang Gratis Pada Media Sosial *Twitter* Menggunakan Metode *Neural Network Classification*. Tugas Akhir. Program Sarjana. Program Studi Teknik Informatika. Universitas Muhammadiyah Jember.

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Media sosial *X* (Twitter) menjadi salah satu platform yang digunakan masyarakat untuk menyampaikan opini terhadap berbagai isu publik, termasuk polemik kebijakan pemerintah mengenai program Makan Siang Gratis. Beragamnya tanggapan masyarakat berupa dukungan, kritik, maupun opini netral menyebabkan diperlukan pendekatan analisis sentimen untuk mengetahui kecenderungan persepsi publik terhadap kebijakan tersebut. Namun, permasalahan ketidakseimbangan distribusi kelas sentimen menjadi salah satu tantangan dalam proses klasifikasi karena dapat menyebabkan model cenderung mengenali kelas mayoritas. Penelitian ini bertujuan untuk menganalisis performa metode *Neural Network Classification* dalam mengklasifikasikan sentimen publik serta mengevaluasi pengaruh penerapan teknik *Random Over Sampling (ROS)* dalam meningkatkan kinerja model. Data penelitian diperoleh dari platform *X* (Twitter) sebanyak 1.500 tweet menggunakan hashtag terkait program Makan Siang Gratis dan dikategorikan ke dalam tiga kelas sentimen, yaitu positif, netral, dan negatif. Tahapan penelitian meliputi *preprocessing* data teks, pembobotan fitur menggunakan *Term Frequency-Inverse Document Frequency (TF-IDF),* klasifikasi menggunakan *Neural Network Classification,* serta penanganan ketidakseimbangan data menggunakan *Random Over Sampling.* Evaluasi model dilakukan menggunakan metode K-Fold Cross Validation dengan variasi nilai K=2, 3, 4, 5, 6, dan 10 serta menggunakan metrik *accuracy, precision, recall, dan F1-score*. Hasil pengujian menunjukkan bahwa model *Neural Network* tanpa penanganan *imbalance* memperoleh *accuracy 68,47%, precision 67,36%, recall 64,02%,* dan *F1-score 64,85%.* Setelah diterapkan *Random Over Sampling, performa* model mengalami peningkatan dengan hasil terbaik pada K=5 yang memperoleh *accuracy sebesar 72,40%, precision 70,37%, recall 69,14%,* dan *F1-score 69,46%*. Berdasarkan hasil penelitian, penerapan *Random Over Sampling* mampu meningkatkan kemampuan model dalam mengenali pola sentimen, terutama pada kelas minoritas, sehingga menghasilkan klasifikasi sentimen yang lebih seimbang terhadap opini masyarakat mengenai kebijakan Makan Siang Gratis.

*Kata Kunci:* Analisis Sentimen*, Neural Network,TD-IDF,Random Over Sampling,* Media Sosial *X (Twitter)*

## *ABSTRACT*

*Dandy Tri Prasetyo. 2026. Public Sentiment Analysis Regarding the Government's Free Lunch Policy Controversy on Twitter Using the Neural Network Classification Method.. Final Project. Undergraduate Program. Informatics Engineering Study Program. Universitas Muhammadiyah Jember.*

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*Social media platform X (Twitter) has become one of the channels the public uses to express opinions on various public issues, including the controversy surrounding the government's Free School Lunch program. The wide range of public responses—including support, criticism, and neutral opinions—makes it necessary to employ a sentiment analysis approach to identify trends in public perception of this policy. However, the issue of an unbalanced distribution of sentiment classes poses a challenge in the classification process, as it can cause the model to favor the majority class. This study aims to analyze the performance of the Neural Network Classification method in classifying public sentiment and to evaluate the impact of applying the Random Oversampling (ROS) technique on improving model performance. The research data was obtained from the X platform, consisting of 1,500 tweets using hashtags related to the Free Lunch Program, and categorized into three sentiment classes: positive, neutral, and negative. The research stages included text data preprocessing, feature weighting using Term Frequency-Inverse Document Frequency (TF-IDF), classification using Neural Network Classification, and addressing data imbalance using Random Over Sampling. Model evaluation was conducted using the K-Fold Cross-Validation method with varying values of K = 2, 3, 4, 5, 6, and 10, and using the metrics accuracy, precision, recall, and F1-score. Test results show that the Neural Network model without imbalance handling achieved an accuracy of 68.47%, precision of 67.36%, recall of 64.02%, and an F1-score of 64.85%. After applying Random Oversampling, the model's performance improved, with the best results achieved at K=5, yielding an accuracy of 72.40%, precision of 70.37%, recall of 69.14%, and an F1-score of 69.46%. Based on the research results, the application of Random Over Sampling was able to improve the model's ability to recognize sentiment patterns, especially in the minority class, resulting in a more balanced sentiment classification regarding public opinion on the Free School Lunch policy.*



*Keywords: Sentiment Analysis, Neural Network, TD-IDF, Random Over-Sampling, Social Media X (Twitter)*