

## ABSTRAK

Media sosial X menjadi sumber utama opini publik terhadap tokoh politik, termasuk Presiden Prabowo Subianto. Penelitian ini bertujuan untuk melakukan analisis sentimen terhadap unggahan pengguna X mengenai Prabowo Subianto pada periode Juni 2023 hingga Juni 2024 menggunakan algoritma *Multinomial Naive Bayes*. Dataset yang digunakan berjumlah 42.199 data hasil *crawling* dari media sosial X. Data diproses melalui tahapan *text preprocessing* yang meliputi *cleansing*, *tokenisasi*, *normalisasi*, *stopword removal*, *stemming*, dan penerjemahan teks kemudian dilakukan pembobotan fitur menggunakan *Term Frequency-Inverse Document Frequency*. Penelitian ini membandingkan kinerja model dengan dan tanpa penerapan data balancing menggunakan *Synthetic Minority Over-sampling Technique* serta menerapkan *K-Fold Cross Validation* untuk validasi model. Evaluasi dilakukan menggunakan metrik *accuracy*, *precision*, *recall*, dan *F1-Score*. Hasil pengujian tanpa *data balancing* menghasilkan *accuracy* tertinggi sebesar 0.6845, *precision* 0.7147, *recall* 0.6407, dan *F1-Score* 0.6590 dengan nilai *alpha* 0.01 serta *CV Mean Accuracy* sebesar 0.6737. Setelah penerapan *SMOTE*, performa model meningkat dengan *accuracy* tertinggi sebesar 0.7006, *precision* 0.6867, *recall* 0.7035, dan *F1-Score* 0.6891 pada nilai *alpha* 1.00 serta *CV Mean Accuracy* sebesar 0.7230. Hasil penelitian menunjukkan penerapan data balancing mampu meningkatkan kemampuan model dalam mengklasifikasikan sentimen secara lebih seimbang. Algoritma *Multinomial Naive Bayes* terbukti efektif untuk analisis sentimen terhadap data media sosial X terkait Presiden Prabowo Subianto periode 2023 hingga 2024.

Kata Kunci: Prabowo Subianto, X (Twitter), Analisis Sentimen, *Multinomial Naive Bayes*, *VADER Lexicon*, *TextBlob*, *SMOTE*, *TF-IDF*

**ABSTRACT**

*Social media platform X serves as a major source of public opinion toward political figures, including President Prabowo Subianto. This study aims to perform sentiment analysis on posts from X users concerning Prabowo Subianto during the period from June 2023 to June 2024 using the Multinomial Naive Bayes algorithm. The dataset consists of 42,199 records collected through crawling from social media platform X. The data are processed through text preprocessing stages including cleansing, tokenization, normalization, stopword removal, stemming, and text translation, followed by feature weighting using Term Frequency–Inverse Document Frequency. This study compares model performance with and without the implementation of data balancing using the Synthetic Minority Over-sampling Technique and applies K-Fold Cross Validation for model validation. Evaluation is conducted using accuracy, precision, recall, and F1-Score metrics. The results without data balancing show the highest accuracy of 0.6845, precision of 0.7147, recall of 0.6407, and F1-Score of 0.6590 with an alpha value of 0.01 and a CV Mean Accuracy of 0.6737. After applying SMOTE, model performance improves with the highest accuracy of 0.7006, precision of 0.6867, recall of 0.7035, and F1-Score of 0.6891 at an alpha value of 1.00 and a CV Mean Accuracy of 0.7230. The results indicate that data balancing improves the model's ability to classify sentiments more evenly. The Multinomial Naive Bayes algorithm is proven to be effective for sentiment analysis of social media X data related to President Prabowo Subianto during the 2023 to 2024 period.*

*Keywords: Prabowo Subianto, X (Twitter), Sentiment Analysis, Multinomial Naive Bayes, VADER Lexicon, TextBlob, SMOTE, TF-IDF*