

ABSTRAK

WAHYU HIDAYAT, NIM 4192550007. Penerapan Algoritma *Naïve Bayes* Untuk Klasifikasi Sentimen Publik Di X (Twitter) Terhadap Kinerja Gubernur Sumatera Utara Terpilih 2024.

Pemilihan Gubernur Sumatera Utara tahun 2024 menarik perhatian masyarakat terhadap kinerja gubernur terpilih, Bobby Nasution. Media sosial X (Twitter) menjadi sarana utama bagi masyarakat untuk menyampaikan opini, baik berupa dukungan maupun kritik. Penelitian ini bertujuan untuk menganalisis dan mengklasifikasikan sentimen publik terhadap kinerja Bobby Nasution ke dalam kategori positif, netral, dan negatif menggunakan algoritma Multinomial Naïve Bayes. Data tweet dikumpulkan dan melalui tahap pembersihan dengan menghapus tweet buzzer dan tweet informatif, dilanjutkan preprocessing teks, pelabelan sentimen otomatis menggunakan TextBlob, serta ekstraksi fitur dengan metode TF-IDF. Data kemudian dibagi menjadi data latih dan data uji dengan proporsi 80:20. Evaluasi model dilakukan menggunakan confusion matrix dan metrik akurasi, precision, recall, serta F1-score. Hasil penelitian menunjukkan distribusi sentimen terdiri dari 953 tweet netral, 636 tweet positif, dan 312 tweet negatif. Model Multinomial Naïve Bayes menghasilkan akurasi sebesar 62,99%, dengan performa terbaik pada kelas netral (F1-score 72,6%), diikuti kelas positif (50,7%), sementara kelas negatif memiliki performa terendah (21,8%). Temuan ini menunjukkan bahwa opini publik cenderung bersifat netral hingga positif, namun masih diperlukan pengembangan metode untuk meningkatkan deteksi sentimen negatif.

Kata Kunci: Sentimen Publik, Naïve Bayes, Twitter/X, TF-IDF, Kinerja Gubernur, Bobby Nasution.

ABSTRACT

WAHYU HIDAYAT, NIM 4192550007. Application of the Naïve Bayes Algorithm for Public Sentiment Classification on X (Twitter) Toward the Performance of the Elected Governor of North Sumatra 2024.

The 2024 North Sumatra gubernatorial election attracted significant public attention to the performance of the elected governor, Bobby Nasution. Social media platform X (Twitter) has become a primary medium for the public to express opinions, including support and criticism. This study aims to analyze and classify public sentiment toward Bobby Nasution's performance into positive, neutral, and negative categories using the Multinomial Naïve Bayes algorithm. Tweet data were collected and cleaned by removing buzzer tweets and informative tweets, followed by text preprocessing, automatic sentiment labeling using TextBlob, and feature extraction using the TF-IDF method. The dataset was then divided into training and testing data with an 80:20 ratio. Model evaluation was conducted using a confusion matrix and performance metrics including accuracy, precision, recall, and F1-score. The results show that the sentiment distribution consists of 953 neutral tweets, 636 positive tweets, and 312 negative tweets. The Multinomial Naïve Bayes model achieved an accuracy of 62.99%, with the best performance on the neutral class (F1-score of 72.6%), followed by the positive class (50.7%), while the negative class showed the lowest performance (21.8%). These findings indicate that public opinion tends to be neutral to positive; however, further methodological improvements are required to enhance the detection of negative sentiment.

Keywords: Sentiment Classification, Naïve Bayes, TF-IDF, Public Opinion, X/Twitter, Bobby Nasution.