ABSTRAK

Hibatullah, Falah Yafi. (2026). Evaluasi Sentimen Masyarakat Di Platform Media Sosial Terhadap Kartu Indonesia Pintar Kuliah (KIP-K) Berbasis *Multinomial Naïve Bayes*. Tugas Akhir. Program Sarjana. Program Studi Teknik Informatika. Universitas Muhammadiyah Jember.

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Kartu Indonesia Pintar Kuliah (KIP-K) merupakan program bantuan pendidikan pemerintah yang banyak dibahas di media sosial X (sebelumnya Twitter). Beragam komentar yang berisi apresiasi, kritik, dan saran menunjukkan adanya respons positif maupun negatif dari masyarakat sehingga diperlukan analisis sentimen untuk mengetahui kecenderungan opini publik terhadap program tersebut. Penelitian ini bertujuan untuk mengetahui tingkat akurasi, presisi, dan *recall* algoritma Multinomial Naïve Bayes dengan teknik *balancing Random Undersampling*, serta mengetahui jumlah sentimen positif dan negatif terhadap KIP-K. Penelitian ini menggunakan 1.000 data yang diperoleh dari media sosial X. Berdasarkan hasil pelabelan manual, dataset terdiri atas 620 sentimen postif dan 380 sentimen negatif. Proses analisis dilakukan melalui tahapan *text preprocessing*, TF-IDF, *Random Undersampling*, dan klasifikasi menggunakan algoritma Multinomial Naïve Bayes dengan evaluasi menggunakan 2-*fold,* 5-*fold,* dan 10-*fold cross validation*. Hasil penelitian menunjukkan bahwa rata-rata performa terbaik diperoleh pada skenario 2-*fold cross validation* dengan akurasi 73,30%, presisi 71,67%, dan *recall* 70,88%. Selain itu, *Random Undersampling* berhasil menyeimbangkan distribusi kelas pada data latih dari 559 data sentimen positif dan 341 data sentimen negatif menjadi distribusi seimbang, yaitu masing-masing 341 data pada setiap kelas. Berdasarkan hasil tersebut, algoritma Multinomial Naïve Bayes dengan teknik *Random Undersampling* memberikan performa yang cukup baik dalam mengevaluasi sentimen masyarakat terhadap KIP-K.

Kata Kunci: Analisis Sentimen, Kartu Indonesia Pintar Kuliah (KIP-K), *Multinomial Naïve Bayes*, *Random Undersampling*.

ABSTRACT

Hibatullah, Falah Yafi. (2026). *Sentiment Analysis of Public Opinion on the Indonesia Smart College Card* (KIP-K) *on Social Media Platfroms Using the Multinomial Naïve Bayes Method. Bachelor's Thesis. Department of Informatics Engineering. Muhammadiyah Unviversity of Jember.*

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The Indonesia Smart College Card (Kartu Indonesia Pintar Kuliah/KIP-K) is a government educational assistance program that has been widely discussed on the social media platform X (formerly Twitter). Various comments containing appreciation, criticism, and suggestions reflect both positive and negative public responses, making sentiment analysis necessary to identify public opinion trends regarding the program. This study aims to determine the accuracy, precision, and recall of the Multinomial Naïve Bayes algorithm using the Random Undersampling balancing technique, as well as to identify the distribution of positive and negative sentiments toward KIP-K. A dataset of 1,000 posts collected from the social media platform X was used in this study. Based on manual labeling, the dataset consisted of 620 positive sentiments and 380 negative sentiments. The analysis process included text preprocessing, TF-IDF feature extraction, Random Undersampling, and classification using the Multinomial Naïve Bayes algorithm. Model performance was evaluated using 2-fold, 5-fold, and 10-fold cross-validation. The results showed that the best average performance was achieved using the 2-fold cross-validation scenario, with an accuracy of 73.30%, a precision of 71.67%, and a recall of 70.88%. In addition, Random Undersampling successfully balanced the class distribution of the training data from 559 positive sentiment posts and 341 negative sentiment posts to an equal distribution of 341 posts for each class. Based on these findings, the Multinomial Naïve Bayes algorithm combined with the Random Undersampling technique demonstrated satisfactory performance in evaluating public sentiment toward KIP-K.

Keywords: *Sentiment Analysis, Indonesia Smart College Card* (Kartu Indonesia Pintar Kuliah/KIP-K), *Multinomial Naïve Bayes, Random Undersampling.*