

ABSTRAK

Gabrielle, Farrel Octanov Radistha. 2026. Analisis Sentimen Komentar *Instagram Reels* tentang Penanganan Banjir di Sumatra Menggunakan Pembobotan TF-IDF dan Metode *Multinomial Naive Bayes*. Tugas Akhir. Program Sarjana. Program Studi Teknik Informatika. Universitas Muhammadiyah Jember.

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Bencana banjir di Sumatra pada 25 November hingga 10 Desember 2025 menimbulkan dampak sosial dan ekonomi yang besar serta memicu respons publik masif melalui komentar di *Instagram Reels*. Penelitian ini mengidentifikasi kecenderungan sentimen masyarakat terhadap respons pemerintah dalam penanganan bencana dan menganalisis kinerja *Multinomial Naive Bayes* dalam klasifikasi sentimen teks komentar berbahasa Indonesia yang informal. Data dikumpulkan melalui *scraping* menggunakan ekstensi peramban *Chrome*, menghasilkan 1.047 komentar. Komentar tanpa label ahli atau dengan teks kosong dihapus menggunakan *dropna()*, sehingga tersisa 854 dokumen yang diproses melalui *text cleaning*, *case folding*, *tokenizing*, *normalization*, *stopword removal*, dan *stemming*. Fitur direpresentasikan dengan TF-IDF n-gram (1,3) sebanyak 500 fitur. Ketidakseimbangan kelas diatasi dengan ROS pada tiga skenario pembagian data: 70:30, 80:20, dan 90:10. Sentimen negatif mendominasi sebesar 58,90%, diikuti netral 27,05% dan positif 14,05%, mencerminkan ketidakpuasan masyarakat terhadap respons pemerintah. Skenario 70:30 menghasilkan kinerja terbaik: akurasi 62,26%, precision 56,38%, recall 57,42%, dan F1-Score 55,86%. Pengujian pada 299 data unseen mencatat akurasi 61,87%, menunjukkan kemampuan generalisasi yang cukup baik. Kombinasi *Multinomial Naive Bayes*, TF-IDF, dan ROS terbukti efektif untuk analisis sentimen komentar media sosial berbahasa Indonesia.

Kata Kunci: Analisis sentimen, *Instagram Reels*, *Multinomial Naive Bayes*, TF-IDF, *Random Over Sampling*, banjir Sumatra

ABSTRACT

Gabrielle, Farrel Octanov Radistha. 2026. *Sentiment Analysis of Instagram Reels Comments on Flood Management in Sumatra Using TF-IDF Weighting and Multinomial Naïve Bayes Method*. Undergraduate Thesis. Bachelor's Program in Informatics Engineering. Universitas Muhammadiyah Jember.

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The flood disaster in Sumatra from November 25 to December 10, 2025 caused significant social and economic impacts and triggered a massive public response through comments on Instagram Reels. This study identifies public sentiment tendencies toward the government's response in disaster management and analyzes the performance of Multinomial Naïve Bayes in classifying sentiment from informal Indonesian-language comment texts. Data were collected via scraping using a Chrome browser extension, yielding 1,047 comments. Comments without expert labels or with empty text were removed using dropna(), leaving 854 documents processed through text cleaning, case folding, tokenizing, normalization, stopword removal, and stemming. Features were represented using TF-IDF with n-gram (1,3) and 500 features. Class imbalance was addressed with ROS across three data split scenarios: 70:30, 80:20, and 90:10. Negative sentiment dominated at 58.90%, followed by neutral at 27.05% and positive at 14.05%, reflecting public dissatisfaction with the government's response. The 70:30 scenario produced the best performance: accuracy 62.26%, precision 56.38%, recall 57.42%, and F1-Score 55.86%. Testing on 299 unseen data points recorded an accuracy of 61.87%, indicating reasonably good generalization. The combination of Multinomial Naïve Bayes, TF-IDF, and ROS proved effective for sentiment analysis of Indonesian-language social media comments..

Keywords: *sentiment analysis, Instagram Reels, Multinomial Naïve Bayes, TF-IDF, Random Over Sampling, Sumatra flood*