ABSTRAK

ANALISIS DETEKSI *BLACK CAMPAIGN* MENGGUNAKAN ALGORITMA *NAIVE BAYES* DAN XGBOOST PADA *PLATFORM* MEDIA SOSIAL TIKTOK

Oleh

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Black campaign merupakan praktik penyebaran informasi negatif yang menyesatkan untuk merusak reputasi individu atau *brand*. Penelitian ini bertujuan mendeteksi *black campaign* terhadap brand *skincare* X menggunakan dua algoritma m*achine learning*, yaitu *Naive Bayes* dan XGBoost, serta membandingkan kinerjanya. Data diambil dari TikTok pada periode September–Desember 2024 dan melalui tahapan *preprocessing* meliputi *cleaning, case folding, stopword removal, normalisasi, stemming, tokenisasi,* serta pembobotan TF-IDF. Evaluasi dilakukan menggunakan *K-Fold Cross Validation* dan metrik akurasi, *presisi*, *recall*, dan *F1-score*.

Hasil pengujian menunjukkan bahwa model XGBoost memiliki kinerja lebih unggul yaitu sebesar 90,36%, *precision* 89,83%, *recall* 91,42%, dan *f1-score* 90,62%. *Multinomial Naive Bayes* memperoleh akurasi sebesar 86,38%, *precision* 85,71%, *recall* 88,57%, dan *f1-score* 87,12%. *Bernoulli Bayes* memperoleh akurasi sebesar 85,54%, *precision* 84,63%, *recall* 87,14%, *f1-score* 85,86%. Hal ini menunjukkan bahwa XGBoost lebih efektif dalam menangani kompleksitas data teks dari media sosial. Penelitian ini memberikan kontribusi pada pengembangan sistem deteksi dini *black campaign* yang dapat membantu *brand* melindungi reputasi dan meningkatkan strategi pemasaran di era digital.

Kata Kunci: *Black Campaign*, TikTok, *Naive Bayes*, XGBoost, Analisis Sentimen

ABSTRACT

ANALYSIS OF BLACK CAMPAIGN DETECTION USING NAIVE BAYES AND XGBOOST ALGORITHM ON TIKTOK MEDIA SOCIAL PLATFORM

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A black campaign is the practice of spreading misleading negative information to damage the reputation of an individual or brand. This study aims to detect black campaigns against the X skincare brand using two machine learning algorithms—Naive Bayes and XGBoost—and compare their performance. The data were collected from TikTok during the period of September–December 2024 and underwent preprocessing stages, including cleaning, case folding, stopword removal, normalization, stemming, tokenization, and TF-IDF weighting. Evaluation was conducted using K-Fold Cross Validation and the metrics of accuracy, precision, recall, and F1-score.

The test results show that the XGBoost model achieved superior performance with an accuracy of 90.36%, precision of 89.83%, recall of 91.42%, and F1-score of 90.62%. The Multinomial Naive Bayes achieved an accuracy of 86.38%, precision of 85.71%, recall of 88.57%, and F1-score of 87.12%. The Bernoulli Naive Bayes achieved an accuracy of 85.54%, precision of 84.63%, recall of 87.14%, and F1-score of 85.86%. These results indicate that XGBoost is more effective in handling the complexity of text data from social media. This study contributes to the development of early detection systems for black campaigns, which can help brands protect their reputation and enhance marketing strategies in the digital era.

Keywords: *Black Campaign, TikTok, Naive Bayes, XGBoost, Sentiment Analysis*