

ABSTRAK

Penelitian ini bertujuan untuk membandingkan kinerja algoritma *Support Vector Machine (SVM)* dan *Naïve Bayes* dalam analisis sentimen terhadap ulasan pengguna aplikasi *TikTokShop*. Seiring berkembangnya *TikTokShop* sebagai platform yang mengintegrasikan media sosial dan *e-commerce*, analisis sentimen menjadi penting untuk memahami persepsi pengguna serta mendukung pengambilan keputusan bagi pelaku bisnis. Data yang digunakan terdiri dari 3.000 ulasan pengguna yang seimbang, masing-masing 1.000 ulasan positif, netral, dan negatif. Data diperoleh melalui teknik *web scraping* dari *Google Play Store* dan diproses melalui tahapan pra-pemrosesan, meliputi pembersihan data, *case folding*, normalisasi, tokenisasi, penghapusan *stopword*, dan *stemming*. Selanjutnya, data diubah menjadi representasi vektor menggunakan metode *TF-IDF*. Evaluasi dilakukan menggunakan metrik akurasi, presisi, *recall*, *F1-score*, *confusion matrix*, dan *10-fold cross-validation*. Hasil penelitian menunjukkan bahwa *SVM* memberikan hasil lebih baik dengan akurasi 68,86%, presisi 68,43%, dan *F1-score* 68,58%. *SVM* menunjukkan kinerja yang seimbang pada semua kategori sentimen. Sebaliknya, *Naïve Bayes* unggul dalam mengklasifikasikan sentimen negatif (94,1%) namun kurang akurat pada sentimen netral (38,5%). Meskipun demikian, *Naïve Bayes* lebih unggul dalam efisiensi waktu pelatihan, yaitu 224 kali lebih cepat dibandingkan *SVM*. Temuan ini menunjukkan bahwa kedua algoritma memiliki kelebihan masing-masing dan berpotensi dikombinasikan melalui pendekatan *ensemble*.

Kata Kunci : Analisis Sentimen, Support Vector Machine, Naïve Bayes, TikTokShop, Klasifikasi Teks.

ABSTRACT

This study aims to compare the performance of the Support Vector Machine (SVM) and Naïve Bayes algorithms in sentiment analysis of user reviews on the TikTokShop application. As TikTokShop evolves into a platform integrating social media and e-commerce, sentiment analysis becomes crucial for understanding user perceptions and supporting business decision-making. The dataset consists of 3,000 balanced user reviews, with 1,000 reviews each for positive, neutral, and negative sentiments. The data was collected through web scraping from the Google Play Store and processed through preprocessing stages, including data cleaning, case folding, normalization, tokenization, stopword removal, and stemming. Subsequently, the data was transformed into vector representations using the TF-IDF method. Evaluation was conducted using accuracy, precision, recall, F1-score, confusion matrix, and 10-fold cross-validation metrics. The results indicate that SVM delivers better performance with an accuracy of 68.86%, precision of 68.43%, and an F1-score of 68.58%. SVM demonstrates balanced performance across all sentiment categories. In contrast, Naïve Bayes excels in classifying negative sentiments (94.1%) but performs less accurately on neutral sentiments (38.5%). Nevertheless, Naïve Bayes is superior in training time efficiency, being 224 times faster than SVM. These findings suggest that both algorithms have their respective strengths and could potentially be combined through an ensemble approach.

Keywords : Sentiment Analysis, Support Vector Machine, Naïve Bayes, TikTokShop, Text Classification.