

ABSTRAK

Perkembangan teknologi informasi mendorong meningkatnya penggunaan layanan *cloud storage* seperti Google Drive, Dropbox, OneDrive, dan Mega. Ulasan pengguna terhadap aplikasi-aplikasi ini yang tersedia di Google Playstore dapat dijadikan sumber data penting untuk memahami persepsi dan kepuasan pengguna. Penelitian ini bertujuan untuk melakukan analisis sentimen terhadap ulasan pengguna tersebut dengan menggunakan algoritma *Support Vector Machine* (SVM) yang dikombinasikan dengan pembobotan kata *Term Frequency-Inverse Document Frequency* (TF-IDF) dan *kernel Radial Basis Function* (RBF).

Data sebanyak 85.617 komentar dalam Bahasa Indonesia dikumpulkan melalui proses *web scraping* dari Google Playstore. Data kemudian diproses menggunakan tahapan *text preprocessing* yang meliputi *cleaning*, *case folding*, *stopword removal*, *negation handling*, *lemmatizing*, dan *tokenizing*. Selanjutnya, data diberi label sentimen (positif, netral, negatif) menggunakan model RoBERTa, dan dilakukan pelatihan model menggunakan algoritma SVM.

Hasil pengujian menunjukkan bahwa akurasi model cukup tinggi dan berbeda-beda di setiap aplikasi, dengan rincian hasil *confusion matrix* sebagai berikut, Google Drive dengan akurasi 89,7%, *Precision* 93%, *Recall* 89%, dan F1-Score 90%. Mega dengan Akurasi 90,3%, *Precision* 94%, *Recall* 90%, dan F1-Score 91%. Dropbox dengan Akurasi 85,1%, *Precision* 89%, *Recall* 85%, dan F1-Score 86%. OneDrive dengan Akurasi 82,3%, *Precision* 86%, *Recall* 82%, dan F1-Score 84%.

Dari hasil tersebut, dapat disimpulkan bahwa penggabungan metode TF-IDF dan algoritma SVM dengan *kernel* RBF mampu memberikan hasil klasifikasi sentimen yang baik terhadap ulasan aplikasi *cloud storage*. Penelitian ini diharapkan dapat menjadi referensi dalam pengembangan sistem analisis sentimen pada aplikasi digital berbasis ulasan pengguna.

Kata Kunci: Analisis Sentimen, Cloud Storage, *Support Vector Machine*, TF-IDF, *Kernel* RBF, Google Playstore

ABSTRACT

The development of information technology has led to an increase in the use of cloud storage services such as Google Drive, Dropbox, OneDrive, and Mega. User reviews of these applications available on the Google Playstore can serve as valuable data sources to understand user perceptions and satisfaction. This study aims to perform sentiment analysis on these user reviews using the Support Vector Machine (SVM) algorithm combined with Term Frequency-Inverse Document Frequency (TF-IDF) weighting and the Radial Basis Function (RBF) kernel.

A total of 85,617 comments in Indonesian were collected through a web scraping process from the Google Playstore. The data then underwent a text preprocessing phase which included cleaning, case folding, stopword removal, negation handling, lemmatizing, and tokenizing. Subsequently, sentiment labels (positive, neutral, negative) were assigned using the RoBERTa model, and the dataset was used to train an SVM model.

The evaluation results show that the model's accuracy was relatively high and varied across different applications. The confusion matrix results are as follows: Google Drive achieved an accuracy of 89.7%, with a Precision of 93%, Recall of 89%, and F1-Score of 90%; Mega achieved 90.3% accuracy, 94% Precision, 90% Recall, and 91% F1-Score; Dropbox reached 85.1% accuracy, 89% Precision, 85% Recall, and 86% F1-Score; and OneDrive achieved 82.3% accuracy, 86% Precision, 82% Recall, and 84% F1-Score.

These findings indicate that combining TF-IDF with the SVM algorithm using the RBF kernel produces effective sentiment classification results for cloud storage application reviews. This research is expected to serve as a reference for developing sentiment analysis systems in user review-based digital applications.

Keywords: *Sentiment Analysis, Cloud Storage, Support Vector Machine, TF-IDF, RBF Kernel, Google Playstore*