

ABSTRAK

Perkembangan layanan perbankan digital mendorong meningkatnya penggunaan aplikasi *mobile banking*, salah satunya aplikasi Muamalat DIN milik Bank Muamalat Indonesia. Seiring bertambahnya jumlah pengguna, aplikasi ini menerima berbagai ulasan yang berisi keluhan maupun apresiasi dari pengguna. Ulasan tersebut dimanfaatkan untuk mengevaluasi kualitas dan kinerja aplikasi melalui analisis sentimen. Penelitian ini bertujuan untuk menganalisis sentimen ulasan pengguna aplikasi Muamalat DIN menggunakan algoritma *Support Vector Machine* (SVM) dan *Random Forest*. Penelitian ini menggunakan pendekatan kuantitatif dengan metode deskriptif. Data diambil dari *Google play store* melalui teknik *web scraping* pada periode 1 Januari 2024 hingga 31 Oktober 2025, dengan total 947 ulasan. Data kemudian melalui tahap *preprocessing* dan diekstraksi menggunakan metode *Term Frequency-Inverse Document Frequency* (TF-IDF). Evaluasi model dilakukan menggunakan *confusion matrix* dan *classification report*. Berdasarkan hasil evaluasi, algoritma SVM memperoleh akurasi sebesar 74% dan memiliki performa yang lebih baik dibandingkan *Random Forest*, khususnya dalam mengklasifikasikan sentimen positif dan negatif. Namun, kedua model masih mengalami kesulitan dalam mengenali sentimen netral yang bersifat ambigu. Hasil penelitian ini diharapkan dapat menjadi bahan evaluasi bagi pengembang dalam meningkatkan kualitas aplikasi Muamalat DIN.

Kata kunci: Analisis Sentimen, Muamalat DIN, *Support Vector Machine*, *Random Forest*

ABSTRACT

The development of digital banking services has driven increased usage of mobile banking applications, one of which is the Muamalat DIN application owned by Bank Muamalat Indonesia. As the number of users grows, the application receives a wide range of reviews containing complaints as well as appreciation from users. These reviews are utilized to evaluate the quality and performance of the application through sentiment analysis. This study aims to analyze the sentiment of Muamalat DIN application user reviews using the Support Vector Machine (SVM) and Random Forest algorithms. This research employs a quantitative approach with a descriptive method. Data was collected from the Google play store through web scraping techniques covering the period from January 1, 2024 to October 31, 2025, with a total of 947 reviews. The data then underwent a preprocessing stage and was extracted using the Term Frequency-Inverse Document Frequency (TF-IDF) method. Model evaluation was conducted using a confusion matrix and classification report. Based on the evaluation results, the SVM algorithm achieved an accuracy of 74% and demonstrated better performance compared to Random Forest, particularly in classifying positive and negative sentiments. However, both models still encountered difficulty in recognizing neutral sentiments that are ambiguous in nature. The findings of this study are expected to serve as evaluation material for developers in improving the quality of the Muamalat DIN application.

Keywords: *Sentiment Analysis, Muamalat DIN, Support Vector Machine, Random Forest*