ABSTRACT

Increased internet access and global digitalization have driven significant changes in the financial sector, particularly digital banking services. Livin' by Mandiri is one of the most widely used banking applications because it has several superior features compared to other digital banks, but the existence of these features has generated various responses from users, including complaints related to performance and service quality. This study aims to evaluate the quality of Livin' by Mandiri based on user responses through reviews on the Google Play Store. The classification method used in this research is Support Vector Machine (SVM), which is a supervised learning method that finds the optimal hyperplane to separate positive and negative sentiments. SVM is effective in text classification, but this method is constrained in determining optimal parameters, so parameter optimization techniques are needed for maximum performance. Therefore, Modified Particle Swarm Optimization (MPSO) is used to improve the accuracy of the model. The results showed that sentiment classification using a ratio of 90% training data and 10% testing data with linear kernel SVM and parameter C = 1, resulted in an accuracy rate of 90,30%, precision 90,64%, recall 89,86%, and F1-score 90,25%. The combination of SVM and MPSO with parameter C = 1.5289 increased the accuracy to 91.33%, with precision 90.87%, recall 91.71%, and F1-score 91.29%. This model is able to classify reviews with a high accuracy of 91.33% and is implemented in a Streamlit-based application, so that sentiment classification can be done interactively and easily used.

Keywords: Livin' by Mandiri, Sentiment Analysis, Support Vector Machine, Modified Particle Swarm Optimization, Streamlit