

ABSTRACT

Pegadaian is one of the state-owned enterprises in the form of a non-bank financial institution. Currently, Pegadaian is undergoing transformation as a tangible form of support for State-Owned Enterprises (BUMN) Transformation. One of the steps to achieve this transformation is by building a digital Pegadaian application as a means to change the analog business model into a digital one. After being launched to the public in 2018, the digital Pegadaian application received varied reviews from users, with the overall rating from the public at 3.5 out of 5 points. Based on interviews with PT Pegadaian, this has prompted the Technology and Information Division of PT Pegadaian to enhance the quality of the digital Pegadaian application. However, a strong foundation is needed to make decisions about where to begin the improvement of this application. Therefore, to aid in the decision-making process, a sentiment analysis research based on aspects was conducted on the digital Pegadaian application, focusing on user reviews in the Google Play Store review column, using the random forest algorithm and the KDD (Knowledge Discovery in Databases) process. The aspects used in this research were learnability, efficiency, errors, and satisfaction, with labels categorized as neutral, positive, and negative. The testing in this research was divided into 2 scenarios, focusing on the split dataset and the use of basic parameters and hyperparameter tuning with the random forest algorithm. The random forest algorithm was chosen for its ability to handle overfitting and improve accuracy. Subsequently, the analysis was performed using accuracy, precision, recall, and F1-score, along with k-fold cross-validation to determine if the model experienced overfitting. The evaluation results showed that the scenario using basic parameters and a 90:10 split data provided the best performance, with an accuracy of 85.1%, precision of 86%, recall of 77.7%, and F1-score of 80.7%.

Keywords: aspect-based sentiment analysis, *random forest*, pegadaian digital, Google Play Store reviews."