

ABSTRACT

The Digital Population Identity (IKD) application is an electronic representation of population documents that displays the user's personal data through a digital device. The IKD application on the Play Store has a relatively low rating, which is 3.5 out of 5 stars, this indicates a level of user satisfaction that is not yet optimal. This study aims to analyze the sentiment of IKD application user reviews. Data was obtained through scraping techniques on user reviews on the Play Store. After the data was collected, a manual labeling stage was carried out to identify sentiment into positive and negative classes. After that, a preprocessing stage was carried out to clean and prepare the data to continue to the next process. Then the data weighting value was carried out with Frequency-Term Weighting (TF-IDF) to build a classification model. This study uses Support Vector Machine (SVM) to classify data with higher accuracy compared to other methods. The initial stage of classification is to divide the dataset into three scenarios 90:10, 80:20, 70:30, which means that the distribution of training data is around 90%, 80%, 70% of the total of all datasets. After that, the resampling method (ADASYN, SMOTE, SMOTETomek) is carried out to balance the classes in the training data that has been divided. After carrying out the resampling stage, the classification stage is carried out using three kernels, namely Linear, Radial Basis Function (RBF), and Polynomial. The classification results from the combination of scenarios produced 27 models, with the highest accuracy of 85% from the classification scenario using the RBF kernel with the SMOTE resampling method from the 90:10 division. To facilitate understanding of the results, this study also developed a web-based dashboard, so that the analysis results can be presented interactively and informatively.

Keywords: *Google Play Store, Digital Population Identity, Kernel, Resampling, Support Vector Machine*