ABSTRACT

CLASSIFICATION OF CUSTOMER SATISFACTION IN THE FLIP.ID APPLICATION USING PIECES FRAMEWORK AND RANDOM FOREST METHODS

Oleh

Fajrin Nurhakim

19103019

Start-up is an organization created with the goal of finding suitable business patterns for generating rapid growth. A few years ago, one fintech start-up called Flip.id emerged, which provided free interbank transfer services. There were several issues with this application, which were supported by literature studies, such as requiring some effort from users to order interbank fund transfers, long processing times for interbank fund transfers, less responsiveness from customer service in serving users who had difficulties, and user complaints related to unique codes when conducting interbank transfer transactions. This study aims to analyze the level of customer satisfaction and observe the results of the classification and accuracy of predicting the level of customer satisfaction of the Flip.id application. The methods used in this study are the PIECES framework and the Random Forest classification method. Of the six PIECES Framework parameters, which have an average satisfaction value of Performance (4.11), Information and Data (4.03), Economy (4.12), Control and Security (4.22), Efficiency (4.10), and Service (4.19), it can be concluded that the Flip.id application, when viewed from the PIECES analysis, can be considered good. Meanwhile, for the Random Forest classification, the best parameter shows balanced data, with 310 data per class. In the Confusion Matrix model, the results showed that 264 data labeled Satisfied were correctly classified, while 21 data with the Satisfied label were classified as Unsure and 2 data with the Satisfied label were classified as Very Satisfied. For 5 data labeled Unsure, they were classified as Satisfied, 9 data with the Unsure label were correctly classified, while 1 data with the Very Satisfied label was classified as Satisfied, and 8 data with the Very Satisfied label were correctly classified. The values obtained from the ratio of 80% training data and 20% test data are Accuracy 94.3%, F1-Score 89.2%, Precision 89.2%, and Recall 90.6%.

Keywords: Customer Satisfaction, Pieces Framework, Flip.id application.