

**Abstract**—Nowadays, the digital wallet service quality topic is emerging, and recent studies show further interest in employing machine learning to extract valuable information into the representative quality measurement. This study focuses on the service quality analysis of DANA, one of Indonesia's most extensive digital wallet applications and the top-ranking finance application on the Google Play Store. This study aims to determine the essential future improvements of digital wallet applications based on user reviews using multiclass classification and sentiment analysis. We apply the Naïve Bayes classification by first preprocessing 53,968 user reviews and labeling them into seven electronic service quality dimensions: efficiency, responsiveness, fulfillment, system availability, contact, privacy, and compensation. The result achieves an accuracy of 0.784 with a dataset of 11,885 user reviews. Furthermore, the sentiment analysis against the seven dimensions identifies more than 69% positive sentiments in all dimensions, except the compensation dimension approaching less than 42%, implying that the dominating digital wallet issue resides in the customer's compensation problem. The conclusion leads to the satisfactory results of the Naïve Bayes classification performance and the sentiment analysis contributions to the digital wallet service quality area.

**Keywords**—multiclass classification, sentiment analysis, service quality, digital wallet, google play review