Abstract− Online shopping using e-commerce is a common activity society does in this digital era. Shopee is one of the well-known e-commerce in Indonesia. There are a lot of e-commerce platforms that can easily be accessed through mobile applications like Google Play Store. Users are allowed to review and rate the application they have downloaded. The review from users can influence potential customers who read online reviews to choose a product or service. Reviews from users also become an opportunity for e-commerce companies to advance their performances and services, thus increasing customer satisfaction. Therefore, to enhance the understandability of user reviews, a system that can efficiently analyze the sentiment is needed. This study aims to design and establish a system that can perform sentiment analysis on the selected aspects. The amount of data used in this research is 4000 reviews. Sentiment classification is implemented by using the Recurrent Neural Network (RNN) algorithm with Query Expansion Ranking (QER) feature selection to classify Shopee application reviews into two classes, which are positive and negative. Feature selection is used to reduce less useful features so that the classification model conducts the classification process optimally and more efficiently. In conclusion, the evaluation results based on an 80:20 data split ratio indicate that the combination of RNN with QER achieves the highest accuracy of 95% in the delivery cost aspect, 93% in the delivery speed aspect, and 86% in the application access aspect. The combination of RNN with QER feature selection in this study achieved the best performance in analyzing sentiment for each aspect studied.

Keyword: Google Play Store; Recurrent Neural Network; Reviews; Shopee; Query Expansion Ranking