

ABSTRACT

Sentiment analysis plays a crucial role in evaluating user opinions and feedback on the BMKG application, which provides weather information and disaster alerts. This study aims to classify user sentiment based on reviews from the Google Play Store using a deep learning approach. The methods employed include Long Short-Term Memory (LSTM), Recurrent Neural Network (RNN), and Artificial Neural Network (ANN), and are compared against Support Vector Machine (SVM) as a conventional baseline. The dataset consists of 3,583 reviews categorized into three sentiment classes: positive, negative, and neutral. Results show that the LSTM model achieved the highest accuracy at 90%, followed by RNN (86%), ANN (82%), and SVM (79%). Positive reviews (50.01%) mostly expressed appreciation for accurate information and timely alerts, while negative reviews (29.98%) highlighted technical issues such as slow data updates. The remaining 20.01% were neutral. The use of deep learning proved to be more effective in capturing linguistic context and sentence structure in user reviews, resulting in higher sentiment classification accuracy. These findings provide valuable insights for developers to improve the BMKG application based on user feedback.

Keywords: BMKG Application, Deep Learning, LSTM, Review Classification, Sentiment Analysis, SVM