Abstract

Sentiment analysis seeks to identify user opinions about products or services based on the reviews they provide. This study examines the sentiment of game reviews on the Steam platform using two classification methods, Support Vector Machine (SVM) and Decision Tree (DT), with a dataset of 1000 reviews that includes 592 positive reviews and 408 negative reviews. The Term Frequency-Inverse Document Frequency (TF-IDF) unigram and bigram were used to extract features, and the performance was evaluated using hyperparameter tuning. The results showed that SVM with TF-IDF unigram and linear kernel provided the best performance with an F1-Score of 0.7513, while SVM with TF-IDF bigram achieved the highest F1-Score of 0.6702. Meanwhile, Decision Tree with TF-IDF unigram achieved an F1-Score of 0.6242, whereas with TF-IDF bigram, it only achieved an F1-Score of 0.6073. These findings show that SVM outperforms other sentiment classification methods on the Steam game review dataset, particularly when unigram TF-IDF is used. This study is expected to help game developers better understand user responses and improve the quality of the games available.