

ABSTRAK

Anime, sebagai salah satu bentuk animasi Jepang, telah mencapai popularitas global dan menghasilkan jutaan komentar dari penggemar di berbagai platform online. Penelitian ini bertujuan untuk menganalisis sentimen komentar *anime* dengan menggunakan model *Long Short-Term Memory* (LSTM) dan *Bidirectional Long Short-Term Memory* (Bi-LSTM), serta menentukan konfigurasi parameter optimal guna memaksimalkan kinerja model. Data penelitian diperoleh dari platform kaggle dan telah melalui proses *preprocessing* untuk memastikan kualitasnya. Evaluasi model dilakukan menggunakan metode *stratified k-fold cross-validation* untuk memastikan generalisasi hasil yang baik. Hasil penelitian menunjukkan bahwa model LSTM dan Bi-LSTM mampu memahami konteks komentar dengan baik. Namun, kedua model mengalami *overfitting*, dengan akurasi tinggi pada data pelatihan mencapai antara 80 hingga 90 persen, sementara akurasi pada data uji hanya sekitar 50 persen. Penyesuaian parameter, seperti jumlah unit *neuron*, *dropout*, *batch size*, dan *epoch*, memberikan peningkatan stabilitas selama pelatihan meskipun belum sepenuhnya mengatasi *overfitting*. Penelitian ini berkontribusi pada pengembangan metode analisis sentimen berbasis LSTM dalam konteks komentar *anime*, sekaligus memberikan wawasan mengenai pengaturan parameter optimal untuk meningkatkan performa model.

Kata kunci: *Anime*, *LSTM*, *Bi-LSTM*, *analisis sentimen*, *hyperparameter tuning*, *overfitting*

ABSTRACT

Anime, as a form of Japanese animation, has achieved global popularity and generated millions of comments from fans across various online platforms. This research aims to analyze the sentiment of anime comments using the Long Short-Term Memory (LSTM) and Bidirectional Long Short-Term Memory (Bi-LSTM) models, as well as determining the optimal parameter configuration to maximize model performance. Research data was obtained from the Kaggle platform and has gone through a preprocessing process to ensure its quality. Model evaluation was carried out using the stratified k-fold cross-validation method to ensure good generalization of the results. The research results show that the LSTM and Bi-LSTM models are able to understand the context of comments well. However, both models suffer from overfitting, with high accuracy on training data reaching between 80 and 90 percent, while accuracy on test data is only around 50 percent. Adjusting parameters, such as number of neuron units, dropout, batch size, and epoch, provides increased stability during training although it does not completely overcome overfitting. This research contributes to the development of LSTM-based sentiment analysis methods in the context of anime comments, while providing insight into optimal parameter settings to improve model performance.

Keywords: Anime, LSTM, Bi-LSTM, sentiment analysis, hyperparameter tuning, overfitting