

ABSTRACT

COMPARISON OF CNN AND CNN-LSTM MODELS IN CONDUCTING ASPECT-BASED SENTIMENT ANALYSIS ON THE REVIEWS OF A LIVE STREAMING SERVICE APP (VIDIODOTCOM)

By

Chandra Dzaki Kusuma

19/438441/PA/18899

Video streaming service apps have great potential in current digital era. Due to the increasing demand for digital entertainment, video streaming apps play an important role in providing users with access to content such as live streaming events, films, and TV series. Analysis of user review is one of the most important things of app development for streaming video services. A review may contain certain aspects that reflect the sentiment or feeling expressed by the users.

This research conducted aspect-based sentiment analysis on the Vidiodotcom app by comparing the performance of the CNN and CNN-LSTM methods. The data used was obtained from Google Play Store. The aspects used in this research are performance and stability, payment, content, and satisfaction.

The findings of this research show that in the aspect classification subtask, the CNN-LSTM model achieves the best overall performance with macro-average precision 0.872, macro-average recall 0.856, and macro-average f1 0.863. Along with that, the CNN-LSTM model outperforms the CNN model in the sentiment classification subtask with an average of macro-average precision of 0.864, macro-average recall of 0.858, and macro-average f1 of 0.860.

Keywords: Natural language processing, Aspect based sentiment analysis, App review, CNN, CNN-LSTM