

Pengaruh Sentimen terhadap Pergerakan Saham Bank BCA (BBCA) dengan model Klasifikasi CNN-GRU dan Ekspansi Fitur dengan GloVe

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Abstract

This study examines the influence of sentiment on the movement of Bank BCA (BBCA) shares using a CNN-GRU classification model and feature expansion with GloVe. The research reveals a strong positive correlation coefficient of 0.76 for positive sentiment and 0.7 for negative sentiment, as determined through the Spearman Rank correlation test. Additionally, the expansion of the GloVe feature improves the accuracy of the GRU classification model when combined with TF-IDF feature extraction. However, implementing the GloVe feature expansion in the CNN classification model results in a decrease in accuracy by 73.9% compared to using only TF-IDF feature extraction. To address this, a hybrid CNN-GRU model with TF-IDF feature extraction and GloVe expansion is proposed, achieving a significant improvement in accuracy. The hybrid model outperforms the individual baselines, demonstrating an increase in accuracy of +1.88 compared to the best CNN baseline with feature extraction and +1.86 compared to the GRU baseline with GloVe feature and feature extraction. These findings emphasize the importance of considering sentiment analysis and feature expansion techniques in predicting the movement of BBCA shares. However, limitations of the study, such as the limited dataset and exclusive focus on Bank BCA's stock prices, highlight the need for future research to encompass a wider range of businesses and incorporate time-shifting techniques for a more comprehensive analysis. Furthermore, a balanced labeling process and increased data volume are recommended to further enhance the accuracy and applicability of future studies in this domain.

Keywords: *Sentiment Analysis, Convolutional Neural Network, Gated Recurrent Unit, Glove, Stocks*
