Analisis kinerja lifelong learning menggunakan model gabungan convolutional neural network dan long short-term memory pada permasalahan analisis sentimen = Analysis of performance lifelong learning using the combined convolutional neural network and long short-term memory model on sentiment analysis in indonesian language

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Abstrak

Analisis sentimen dilakukan untuk menganalisis pendapat atau pandangan seseorang terhadap suatu masalah tertentu. Analisis sentimen dapat dilakukan secara manual, tetapi jika menggunakan data berskala besar akan lebih mudah dilakukan secara otomatis yaitu dengan menggunakan machine learning. Namun, machine learning hanya efektif digunakan pada satu domain saja sehingga dikembangkanlah lifelong learning. Lifelong learning merupakan machine learning yang dapat melakukan pembelajaran secara berkelanjutan. Pada penelitian ini, model yang digunakan adalah model CNN-LSTM dan LSTM-CNN. Pada kinerja transfer of knowledge, model CNN-LSTM dan LSTM-CNN menunjukkan hasil lebih baik dibanding model LSTM, tetapi kedua model gabungan tersebut kinerjanya lebih buruk dibanding model CNN. Sedangkan, pada kinerja loss of knowledge, model model CNN-LSTM dan LSTM-CNN menunjukkan hasil lebih baik dibanding model CNN, tetapi lebih buruk dibanding model LSTM. Pada penelitian ini, diimplementasikan juga lifelong learning dengan pembaruan vocabulary. Penambahan pembaruan vocabulary pada lifelong learning meningkatkan kinerja model CNN, LSTM, CNN-LSTM, dan LSTM-CNN pada transfer of knowledge dan loss of knowledge

.....Sentiment analysis is done to analyze a person's opinion or views on a particular problem. Sentiment analysis can be done manually, but if you use large-scale data it will be easier to do it automatically by using machine learning. However, machine learning is only effective in one domain, so lifelong learning is developed. Lifelong learning is machine learning that can carry out continuous learning. In this study, the models used are the CNN-LSTM and LSTM-CNN models. In the transfer of knowledge performance, the CNN-LSTM and LSTM-CNN models showed better results than the LSTM model, but the two combined models performed worse than the CNN model. Meanwhile, for the loss of knowledge performance, the CNN-LSTM and LSTM-CNN models showed better results than the CNN model, but worse than the LSTM model. In this study, lifelong learning with vocabulary updates was also implemented. The addition of vocabulary updates to lifelong learning improves the performance of the CNN, LSTM, CNN-LSTM, and LSTM-CNN models on transfer of knowledge and loss of knowledge