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Development of A Chatbot for the Online Application Telegram Chat with An Approach to the Emotion Classification Text Using the Indobert-Lite Method

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Abstract

The increasing preference for text-based communication on online chat applications has caused the number of social interactions to increase rapidly. However, text-based communication usually results in misunderstandings resulting from the absence of feeling intonation and emotions in the text. This study aims to create a chatbot that can detect emotions text to be entered into online chat applications. This study used a pre-trained model specifically trained from a collection of Indonesian-language datasets, namely IndoBERT-lite. The dataset used to train the model is a collection of Indonesian tweets totaling 4,403 which have been labeled with 5 classes of emotions, namely love, happy, anger, sadness, and fear. The hyperparameters used in this study to train the model were 5 epochs, batch size 16, learning rate 0.000003, and adam optimizer. Based on the test results with the parameters already mentioned, the accuracy, F1 score, recall, and precision values were obtained in the training set of 89%, 89%, 89%, and 90%, while the validation set obtained 70%, 71%, 70%, and 72%. © 2022 IEEE.

Author Keywords

chatbot; emotion classification; IndoBERT-lite; Online chat application; pre-trained model; Telegram

Index Keywords

Text processing; Chatbots, Emotion classification, IndoBERT-lite, Indonesian languages, On-line applications, Online chat application, Pre-trained model, Social interactions, Telegram, Text-based communication; Social networking (online)

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