ABSTRACT

Making a Chatbot on the Karawang Regency Nutrition Association Website using the Bidirectional Encoder Representations from Transformers Method

PERSAGI (Persatuan Gizi) Kerawang Regency has a website that is used as a nutritional health information service. However, the dissemination of information is less effective because of the large and complex requests for information. Problems like this can be solved by using a chatbot. Chatbot is a virtual assistant based on artificial intelligence that is able to interact directly using natural language. With the ability to operate 24 hours non-stop, automate the delivery of information, increase accessibility, and speed up the service process to website visitors. The goal is to develop a chatbot based on the Bidirectional Encoder Representations from Transformers (BERT) method to support the dissemination of information on the PERSAGI Karawang Regency website more effectively and flexibly. In the process of developing the chatbot, researchers used the Bidirectional Encoder Representations from Transformers (BERT) method, especially IndoBERT. BERT is a large model of the Indonesian language data set or corpus taken from Wikipedia and other information sources. In the development process, the dataset used amounted to 1,864 data collected through interviews, observations, literature studies, and literature reviews. The results of the study showed that the developed chatbot was able to achieve good performance with a validation loss of 0.565168, accuracy of 87.67%, f1-score of 84.64%, precision of 85.35%, and recall of 86.30%. These results indicate that the IndoBERT method is effective in building a chatbot that can meet the information needs of website visitors quickly and accurately.

Keywords: *Chatbot, Natural Language Processing, Bidirectional Encoder Representations from Transformers.*