Abstract

The frequently asked questions menu displays information as frequently asked questions about the company's services and products. Also, sometimes users have to browse through all the pages to find the information they need, which takes a long time. An alternative offered by banking companies such as BRI is Sabrina, a chatbot that can answer questions about BRI products. However, the chatbot is made using the decision dialogue method so it has no knowledge of sentence sentiment. Traditional methods such as word2vec which directly perform data training are no longer efficient because of the limited representation of sentences. Therefore we need a method that can connect words between words so that the model can understand it better, namely using graph-based representation. Changed data will be processed with a graph-based model. Therefore, this automation is needed to be able to find out the performance of chatbots while at the same time providing sentiment knowledge through conversations with users. In this study, three graph-based recommendation models and three tree-based recommendation models were applied. The graph-based models used are GCN, Chebycev-Graph and Transformer-Graph. The tree-based models used are Random Forest, LightGBM and XGBoost. Of the six models made, a comparison was made of performance and inference time. The experimental results show that the graph-based recommendation model produces an Accuracy value similar to that of XGBoost, namely 0.7173. In terms of inference time, graph-based models are 3 times faster than tree-based models.**Keywords: Chatbots, Banking, Graph**