

Abstract

The current technological advancements can assist higher education institutions in facilitating students to obtain information. One of the technologies that can be applied in the field of education is artificial intelligence, such as chatbots for academic information services. This research discusses the development of an Academic Information Service Chatbot to address the inefficiency of academic information services that are only available through direct contact with academic staff. This becomes a constraint as the information is not always available at all times. The use of chatbots is important because it can enhance the efficiency and responsiveness of academic services, allowing students to access information anytime and anywhere. The solution implemented is the development of a chatbot based on Recurrent Neural Networks with Long Short-Term Memory. This system is designed to process text input from users and provide relevant answers. The data for training the chatbot is taken from the FAQ of LAA FIF Telkom University as the main reference. This chatbot is developed to answer questions regarding academic services. The test results show that the chatbot has high accuracy with an accuracy of 94.86%, a precision of 95.41%, a recall of 94.86%, and f1-score 94.74%. The implementation of Recurrent Neural Networks with Long Short-Term Memory enables the chatbot to understand the context of the conversation well, provide accurate answers, and improve the efficiency of academic information services. These results indicate that the chatbot system is highly feasible and effective in helping students obtain the necessary information.

Keywords: Chatbot, Recurrent Neural Networks, Long Short-Term Memory, Academic services.
