

ABSTRACT

AI CHATBOT FOR ACADEMIC SERVICES OF TELKOM PURWOKERTO INSTITUTE OF TECHNOLOGY USING LONG SHORT TERM MEMORY

By

Muhammad Rahaji Jhaerol

19102144

In recent years, chatbot systems have rapidly developed in various fields, especially in education. Therefore, the demand for academic services such as chatbots will continue to increase. However, most academic-related information needs to be conveyed directly or through social media, which may take some time to obtain and requires academic services to be available for direct contact or through social media. The use of chatbots has been implemented in previous research, such as the NEU-chatbot for admission at the National Economics University, Dinus Intelligent Assistance (DINA) chatbot for university admission services, chatbot for elderly care using Long Short-Term Memory (LSTM), and automated Thai-FAQ chatbot using RNN-LSTM. LSTM is used because it can process, predict, and classify data that has been stored over a long period of time. Therefore, this research aims to develop an AI chatbot to meet the needs of students regarding academic service information using Long Short-Term Memory (LSTM). The dataset used consists of frequently asked questions (FAQs) by students and FAQs from the Kampus Merdeka website, which are then preprocessed for the classification model's creation. The performance of the model was tested using a multi-confusion matrix, and an accuracy of 81% was achieved, with precision, recall, and f1-score values of 0.84, 0.82, and 0.80, respectively. These results indicate that the model is suitable for use and deployment on a website using the Flask framework. The chatbot works well as it can identify questions related to MBKM programs such as teaching campuses, independent studies, internships, Bangkit, student exchange, KKNT, and others that are present in the dataset.

Keywords : *ai-chatbot, deep learning, lstm, independent campus.*