RASA Chatbot Using AI

Prof. Kanchan B Malusare¹, Dnyaneshwari P Kodlinge², Sakshi B Jogde³, Kimaya V Bhosale⁴, Simran S Kudale⁵
Professor, Department of Computer Science and Engineering¹
Students, Department of Computer Science and Engineering²,³,⁴,⁵
Navsahyadri Institute of Technology, Pune, Maharashtra, India
Corresponding Author: dnyaneshwari.kodlinge1226@gmail.com²

Abstract: The growth of technologies like Artificial Intelligence (AI), Big Data & Internet of Things (IoT), etc. has marked many advancements in the technological world since the last decade. These technologies have a wide range of applications. One such application is “Chatterbot or “Chatbot”. Chatbots are conversational AIs, which mimics the human while conversing & eliminates the need of human by automating mundane tasks. In the study undertaken, we have created a chatbot in education domain & it is named as “College Enquiry Chatbot”. This chatbot is a web-based application that analyses and understands user's queries and provides an instant and accurate response. Rasa technology is used to construct this chatbot. It's an open-source technology, which uses its two main packages i.e., Rasa Core & Rasa Natural Language Understanding (NLU) in order to build a Contextual AI Chatbot. NLU is used to infer the intent and to extract the necessary entities from user input & the Rasa Core provides the output by building a probabilistic model with the help of Recurrent Neural Network (RNN). Evaluation of the model is done by getting a confusion matrix and performance measures like Precision, Accuracy & F1 Score which come out to be 0.628, 0.725 and 0.669 respectively on average basis. This chatbot's accuracy, lack of dependability on human resources, 24 x 7 accessibility and low maintenance creates various opportunities for its implementation. This conversational agent can not only be used in educational institutions but also in places where enquiry becomes a tedious task.

Keywords: Rasa Framework, AI, Chatbot, Query, Open Source, NLP, College Enquiry Chatbot.

REFERENCES

[1]. Jayesh Gangrade1, Surinder Singh Surme2, Sumant Somu3, Shubham Raskonda4, Poonam Gupta, A Review on College Enquiry Chatbot, G.H. Raisoni College of Engineering and Management, Pune, India, 2019 IJESC.
[2]. Hiral Paghadal1, Aneeka Virani2, Apratim Shukla3, Dr. G T Thampi, Department of Information Technology, Thadomal Shahani Engineering College, Mumbai, Maharashtra, India, May 2020