

ABSTRACT

This research aims to improve the efficiency of customer service, particularly in university academic services by developing a chatbot using the RASA opensource framework. Chatbots are now commonly utilized to enhance customer service efficiency by automating information distribution, offering round-the-clock support, and lightening the burden on human employees. Nonetheless, current chatbot systems in university academic services continue to encounter difficulties in delivering real-time information and comprehending intricate user inquiries. The approach we suggest, utilizing the Dual Intent and Entity Transformer (DIETClassifier) within the Rasa framework, greatly improves chatbot efficiency. By enhancing intent classification and entity extraction, this system can provide quicker and more precise responses, minimizing delays in retrieving academic information. This research finds a notable improvement in operational effectiveness by having the chatbot produce the correct response for each question with research showing up to 96% accuracy in recognizing questions and providing accurate responses. This research aids in the advancement of intelligent systems within educational settings and can be modified for various sectors that need effective customer assistance.

Keywords: Customer Service, Rasa, Chatbot, Dual Intent and Entity Transformer, Intent Classification, and Entity Recognition