

ABSTRACT

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IMPLEMENTATION OF A WHATSAPP-BASED CUSTOMER SERVICE CHATBOT USING DIALOGFLOW TO DISPLAY INFORMATION

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Keywords : *chatbot*, Dialogflow ES, *Rapid Application Development* (RAD), WhatsApp Business API, *webhook*.

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Micro, Small, and Medium Enterprises (MSMEs) engaged in mountain equipment rental still face challenges in providing customer information services because customer inquiries through WhatsApp are handled manually. This study aims to design and implement a WhatsApp-based customer service chatbot to provide rental information automatically. The research employed the *Rapid Application Development* (RAD) method, which consists of the *Requirements Planning*, *User Design*, *Construction*, and *Cutover* phases. The system was developed using the WhatsApp Business API, Dialogflow ES, a Python Flask-based webhook, and Google Sheets as the data storage medium. The chatbot is capable of providing information on equipment lists, rental prices, business location, rental requirements, rental procedures, and directing customers to contact the administrator when necessary. The results of *Black Box Testing* indicate that all main system functions operate according to the specified functional requirements. In addition, the system is able to provide automatic responses, thereby improving the efficiency of customer information services. The developed system is still in the form of a prototype and uses a WhatsApp Test Number, allowing for further development and implementation in a real operational environment.

Bibliography (2022-2025)