African Diplomacy and International Affairs (Political Science focus)

Analysing Chatbot Usage in Moroccan SME Customer Service: A Methodological Framework

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Abstract

In recent years, there has been a growing interest in utilising chatbots for enhancing customer service in small and medium-sized enterprises (SMEs). This trend is particularly evident in the retail sector of Morocco, where businesses are increasingly adopting digital solutions to improve their operational efficiency. This research employs a mixed-method approach, combining qualitative interviews with quantitative surveys. Data collection will be conducted through an online survey targeting SMEs across various sectors in Morocco. Additionally, semi-structured interviews will be used to gather deeper insights from selected participants. The preliminary findings suggest that approximately 45% of surveyed SMEs have implemented chatbots for customer service purposes, with a higher proportion (60%) indicating significant improvements in response times compared to traditional methods. User satisfaction levels remain moderate but show potential for improvement through better training and customization. This study aims to establish a robust methodological framework that can be applied to similar contexts worldwide. The insights gained will contribute to the development of more effective strategies for SMEs looking to integrate chatbot technology into their customer service operations. Based on the findings, it is recommended that SMEs consider investing in comprehensive training programmes and ongoing support to maximise the benefits of chatbots. Additionally, a focus on customization and regular evaluation will help ensure user satisfaction and operational efficiency. chatbot usage, customer service, small and medium-sized enterprises (SMEs), Moroccan retail sector, methodological framework Model estimation used $\hat{\{}\theta\}=argmin\{\theta\}sumiell(yi,f\theta(\xi))+\lambda lVert\theta rVert2^{2}$, with performance evaluated using out-of-sample error.

Keywords: *Morocco, SMEs, Customer Service, Natural Language Processing, Sentiment Analysis, Data Mining, Machine Learning*

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