Chapter 10
A Chatbot-Based Strategy for Regional Language-Based Train Ticket Ordering Using a novel ANN Model

Kiruthika V
https://orcid.org/0000-0003-1915-6315
Vellore Institute of Technology, Chennai, India

Sheena Christabel Pravin
Vellore Institute of Technology, Chennai, India

Rohith G
Vellore Institute of Technology, Chennai, India

Aswin B.
Vellore Institute of Technology, Chennai, India

Ompirakash S
Vellore Institute of Technology, Chennai, India

Danush Ram R
Vellore Institute of Technology, Chennai, India

ABSTRACT

Chatbots are becoming increasingly crucial in modern society. Typically, a large group of individuals will purchase train tickets together. This requires considerable effort and time. Multiple inquiries from a user are part of the booking procedure. In this research, the authors create an intelligent, user-friendly chatbot for booking train tickets in the native language. In this study, a Tamil-speaking chatbot is developed to assist with train ticket purchases. The authors employed NLP techniques to create

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an effective and user-friendly conversational interface. The above poll indicates that chatbots have been used in a variety of contexts with positive results. This method will make purchasing tickets much less of a burden for residents of remote areas, who will appreciate it. The ANN model is used to train the chatbot to discern the consumer's desires and respond accordingly. The proposed method has a success rate of 85% and will benefit consumers by expediting and simplifying ticket transactions.

1. INTRODUCTION

Excellent software that can simulate and handle user inquiries is a chatbot. Its use in a wide variety of consumer-focused contexts has been on the rise in recent years. Communicating with others is simplified and improved by chatbots. Many industries have found widespread use for chatbots, and their popularity continues to grow. Emails and phone calls to inquire about something are laborious and cause unneeded delays. Chatbots save time and energy by providing instantaneous responses to inquiries. They are easy to use and accomplish their goal without sacrificing quality. When questions are answered quickly, customers are relieved and satisfied. Conversational interfaces, or chatbots, are increasingly being used in business to improve operational efficiency, resulting in significant cost savings for both the business and the country. By automating responses to common customer questions, chatbots help businesses save time and money by responding to fewer customer service requests. A company can scale, personalize, and be proactive with the help of chatbots. Having access to customers' private information has the potential to vastly improve results, as suggested by the available evidence in the literature Liu et al., 2017. Marketing campaigns that employ chatbots to encourage the purchase and use of consumer goods have seen widespread implementation to date. The literatures that used Chatbots in various fields are Aishwarya and Chawla, 2020 in Education, Chinedu and Abejide, 2021, in student services Petrovic et al., 2020, in website management, Siddharth et al., 2015 in healthcare, Jovanovic et al., 2021, in individualised communication and Darius and Sophie, 2018, in transactions and Rossmann et al., 2020 in customer service.

Railways, electricity, bus services, gas booking, and many more applications could all benefit by incorporating chatbots to improve communication and resolve customer issues more quickly and effectively. This research suggests creating a chatbot to help with booking train tickets. There is currently a lot of progress being made in the field of Natural language processing for creating pipelines and grammar checks in different regional languages. So using a chatbot that is based on a specific language can increase the efficiency with which train tickets are booked. It would be much more convenient for customers to book tickets if they could do so in their