

Multilingual Customer Support Chatbot Using OpenAI and Machine Learning

A PROJECT REPORT

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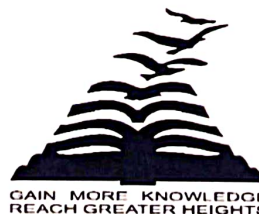
in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

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(ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING)**

At



PRESIDENCY UNIVERSITY

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PRESIDENCY UNIVERSITY

SCHOOL OF COMPUTER SCIENCE ENGINEERING

CERTIFICATE

This is to certify that the Project report **Multilingual Customer Support Chatbot Using OpenAI and Machine Learning** being submitted by **VIDHYASHREE V, SALAPAKSHI SAGAR, CHALLA YOGESH, TALLA SUNILKUMAR, GADE PRATHYUSA** bearing roll numbers **20211CAI0081, 20211CAI0094, 20211CAI0162, 20211CAI0198, 20211CAI0200** in partial fulfillment of the requirement for the award of the degree of **Bachelor of Technology in Computer Science and Engineering (AI&ML)** is a Bonafide work carried out under my supervision.



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DECLARATION

We hereby declare that the work, which is being presented in the project report entitled **Multilingual Customer Support Chatbot Using OpenAI and Machine Learning** in partial fulfillment for the award of **Degree of Bachelor of Technology in Computer Science and Engineering (AI&ML)**, is a record of our own investigations carried under the guidance of **Dr. AFROZ PASHA**, Assistant Professor, School of Computer Science and Engineering, Presidency University, Bengaluru.

We have not submitted the matter presented in this report anywhere for the award of any other Degree.

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ABSTRACT

In the realm of customer support, businesses are consistently exploring innovative methods to enhance the speed, efficiency, and quality of services provided to their clientele. Traditional customer service approaches, predominantly reliant on human agents, often face challenges such as high operational costs, limited availability, slower response times, and restricted scalability. Machine learning-powered chatbots emerge as a promising solution to address these limitations. With the increasing use of the internet, numerous businesses have shifted to online platforms for addressing customer queries. Many organizations have adopted chatbots to improve their customer service operations, streamline processes, and boost productivity. However, existing chatbot technologies often fall short of achieving the autonomous, conversational capabilities businesses aim to implement. This paper delves into the evolution of chatbots and examines recent research trends aimed at developing human-like conversational agents capable of bridging this technological gap. A review of literature spanning two decades, from 1998 to 2018, provides a detailed analysis of chatbot advancements. The findings indicate that chatbots typically function in three stages: interpreting natural language inputs, generating appropriate responses, and constructing coherent, realistic replies. A primary challenge in creating advanced chatbots lies in the limitations of natural language processing (NLP) technologies. Without the ability to fully comprehend the context and content of a user's input, chatbots struggle to deliver meaningful and relevant responses. In customer support, particularly in sectors like insurance and compensation, chatbots play a pivotal role. They are equipped to handle tasks such as offering guidance, assisting with claims, and providing legal support to individuals affected by incidents such as vehicular accidents. As the demand for personalized and efficient customer service continues to grow, organizations are leveraging machine learning technologies to meet evolving customer expectations. This review paper focuses on the advancements in customer support chatbots, specifically within the insurance and compensation domains. It examines how these systems have transitioned from rule-based models to sophisticated AI-driven agents capable of managing diverse customer inquiries.

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