CUSTOMER SUPPORT CHATBOT WITH ML BASED ON HEALTHCARE

A PROJECT REPORT

Submitted by,

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Under the guidance of,

Dr. LEELAMBIKA K V

in partial fulfillment for the award of the degree of

BACHELOR OF TECHNOLOGY

IN

COMPUTER SCIENCE AND ENGINEERING

At ·



PRESIDENCY UNIVERSITY
BENGALURU
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PRESIDENCY UNIVERSITY

SCHOOL OF COMPUTER SCIENCE ENGINEERING CERTIFICATE

This is to certify that the Project report "CUSTOMER SUPPORT CHAT BOT WITH ML BASED ON HEALTH CARE" being submitted by "Mamatha S, Prachi, Narmada Radhika J S, Nithya T M" bearing roll number(s) "20211CSG0048, 20211CSG0025, 20211CSG0028, 20211CSG0006" in partial fulfillment of the requirement for the award of the degree of Bachelor of Technology in Computer Science and Engineering 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 CUSTOMER SUPPORT CHAT BOT WITH ML BASED ON HEALTHCARE in partial fulfillment for the award of Degree of Bachelor of Technology in Computer Science and Engineering, is a record of our own investigations carried under the guidance of Dr. LEELAMBIKA K V, Assistant Professor(Senior Scale), School of Computer Science Engineering & Information Science, 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

Mental health issues, including depression, anxiety, and stress, have become global concerns, affecting millions across all age groups. The World Health Organization (WHO) estimates over 264 million people suffer from depression, with young adults aged 15 to 29 being particularly vulnerable. Despite growing awareness, barriers such as societal stigma, a lack of mental health professionals, long wait times, and high costs hinder access to care, especially in low- and middle-income countries where services are scarce. This project aims to bridge these gaps by developing an AI-powered conversational agent that provides accurate, immediate medical guidance. With the increasing reliance on online platforms for health information, users often encounter unreliable content. This chatbot offers a dependable, scalable solution to connect individuals with credible healthcare resources. Built on a robust dataset of healthcare textbooks and peer-reviewed research, the chatbot ensures responses are precise, relevant, and evidence-based. By integrating Pinecone-powered semantic search, it retrieves real-time data that matches user queries, while GPT enhances natural language understanding to deliver human-like, context-aware answers to a wide range of medical inquiries. The chatbot features an intuitive, user-friendly web interface developed using Flask, ensuring accessibility for users of all technical backgrounds. Its modular architecture supports scalability and future enhancements, such as multilingual support and integration with wearable devices for real-time health monitoring. This solution reduces barriers to healthcare by providing instant, reliable answers to medical concerns, empowering users to make informed decisions. By easing the burden on healthcare professionals, it is particularly impactful in underserved regions where access to care is limited. The reliance on authoritative datasets minimizes misinformation, addressing the dangers of self-diagnosis and unreliable sources. In conclusion, this project represents a transformative step in Al-driven healthcare. By combining advanced technology with comprehensive medical knowledge, it addresses immediate healthcare needs while paving the way for future innovations in digital health. Its focus on reliability, scalability, and user-centric design ensures it remains a vital tool for improving global health outcomes.