

## **AI-POWERED VIRTUAL HEALTH AID: ENCOURAGING AUTONOMOUS DIAGNOSIS**

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### **ABSTRACT**

*We detail how to develop and operate a medical chatbot that self-diagnoses using state-of-the-art AI techniques. The chatbot, referred to as "Bot," is designed to provide medical advice by understanding and responding to user queries on a variety of medical topics. Several health-related dialogue files are among the many datasets that the chatbot, which employs the Chatterbot structure for learning through machine learning and language processing, was trained on. The implementation of the system makes use of the Flask framework, which offers a user-friendly online interface for interaction.*

*The Pyttsx3 text-to-s library is also incorporated, which enhances the user interface by providing audio responses. Should any prior database be erased, the chatbot needs to be trained from the beginning to ensure that the information it contains is accurate and up-to-date. Every information file is meticulously examined to inform the chat bot on specific medical situations and disorders in order to guarantee a wide coverage of potential user requests. By selecting the optimal response based on the input query, the optimal Match algorithm drives the chatbot's logic.*

*The capacity to record and store conversations is another component of the implementation that allows for future analysis and continuous system enhancement. Preliminary tests reveal that the chatbot can understand and respond to a variety of medical queries, suggesting that it may prove to be a helpful tool for first consultations with doctors. The system's objective is to make it easier and faster for consumers to seek medical advice, which will reduce the strain on medical professionals.*

**KEYWORDS:** *Self-Diagnosis, Medical Chatbot, Artificial Intelligence, Natural Language Processing, Machine Learning, Chatterbot, Flask, Healthcare Automation, Text-to-Speech Integration, Medical Consultation*

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