**Health Care CHATBOT**

**A Minor Project Synopsis Submitted to**

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**Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal**

**Towards Partial Fulfillment for the Award of**

**Bachelor of Technology**

**(Computer Science and Engineering)**

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# Abstract

The new healthcare delivery system is complicated, unreliable, and unsustainable. Machine learning (ML), used to improve system performance, has completely changed how businesses and individuals collect and analyze data. Structured, unstructured, and semi-structured data can all be analyzed using machine learning techniques. A virtual assistant may converse with patients in their local language to understand their complaints, provide medical advice, and monitor health indicators.

# Introduction of the Project

The transition to modern medicine in healthcare has been sped using computer-generated analytics and electronic medical reporting to support clinical and administrative processes. The usage of specialised IT skills and resources is frequently required when attempting to get data from a sizable database. As a result, healthcare professionals frequently rely their decisions on their own perspectives or those of their colleagues. To identify linked patients, predict disease rates, and identify effective therapies, health practitioners may find it particularly helpful to employ an information retrieval system based on a QA model. Businesses, universities, and organisations can automate a variety of online and customer support tasks with chatbots. Quick responses are given to frequently requested questions by the client. A chatbot system that interacts with patients has been proposed. Patients are more likely to worry about their medications and other programmes they utilise because of their conditions. Instead of dialling an anonymous individual to receive a quick response, chatbots will be used. A chatbot is a piece of software that can communicate with and learn from people. For user input and output to and from chatbots, the great majority employ a graphical user interface (GUI) like that of a messenger. The chat bot comprehends and responds to user remarks.

# Objective

The Objective of this project is to develop a CHATBOT for Health Care Facilities which will allow the user to communicate between patients and health care professionals. These bots will be used to provide timely access to relevant healthcare information to the patient .As treatment compliance and awareness of patients' symptoms increase, chatbots will lessen the strain of healthcare workers by lowering hospital visits, unneeded treatments and procedures, and hospital admissions and readmissions. The users of this chatbot will be benefited by spending less time commuting to the doctor’s office, less money spent on unnecessary treatments/tests and easy access to the doctor at the push of a button.

# Scope

Future prospects are very promising. It can be used by anyone seeking medical assessment. After reviewing patient data, chatbots in the healthcare industry can offer initial support during one-on-one talks. Since AI-powered chatbots can respond to patient inquiries at all hours and provide prompt medical advice, health chatbots strengthen the brand identification of the healthcare facilities that use them.

# Study of Existing System

A case study of at least 5 existing systems should be done and relative comparison with their merits and demerits. This will help in formulation of further objectives that could be addressed within the project.

Existing System

1. OneRemission:

* Problems Addressed

For cancer patients and cancer survivors,the app empowers them by providing a comprehensive list of diets, exercises, and post-cancer practices, curated by Integrative Medicine experts, so that they don’t need to constantly rely on a doctor.

* Advantages

Useful for cancer patients

* Disadvantages

Only useful for Cancer patients

* Gaps Identified

Specially made for Cancer patients

* Reference link

[1] <https://medicalfuturist.com/top-12-health-chatbots/>

2. Youper:

* Problems Addressed

Basing itself on the latest scientific research, Youper’s A.I. monitors and improves users’ emotional health with quick personalized conversations using psychological techniques.

* Advantages

Improve their emotional health, the app features personalized meditations as well as the ability to track mood and monitor emotional health.

* Disadvantages

Only take care of mental health of the patient

* Gaps Identified

Improve mental health of the patient.

* Reference link

[1] <https://medicalfuturist.com/top-12-health-chatbots/>

# Project Description (200 words)

Chatbots are computer programmes designed to respond to messages automatically. Chatbots can be configured to react consistently, differently in response to messages containing particular keywords, or even to employ machine learning to modify their responses based on the context. With the aid of this healthcare chatbot system, hospitals will be able to offer online healthcare support twenty-four hours a day, seven days a week. Additionally, it aids in the creation of leads and instantly transmits lead information to sales. Patients benefit by being guided as to what they are specifically looking for by the series of questions that are askedTop of Form

# Methodology/Planning of the Project work

A software development methodology in the context of software engineering is the division of software development work into discrete phases (or stages) containing tasks with the aim of improving planning and management. It is frequently regarded as a portion of the system development life cycle.

There are various approaches to software development.

We have decided to use agile development for this program. An iterative method of software development is known as an agile methodology. The agile software development method usually incorporates usable product feedback. It is a collection of approaches that exhibit a dedication to rapid feedback cycles and ongoing improvement. At every step of the project, agile teams within the company collaborate daily in person meetings. By working together and communicating, the process is maintained.

# Expected Outcome (100-150 words)

The expected outcomes of this project are:

* The basic goal of this chatbot is to provide medical assistance to whosoever needs it.
* Easily understandable user interface
* Chatbot should be able to answer general healthcare questions which includes the medicines, treatment and how to prevent a particular disease.
* Chatbot must be able to predict possible diagnosis.

# Resources and Limitations (150 words)

Software Requirements-

* Python
* NumPy
* Pandas
* Windows - 7/8/10/11

Hardware Requirements -

* CPU: Intel Pentium 6300 MHz (minimum)
* RAM: 256 MB (minimum)

# Conclusion

Patients are never left unattended when using chatbots. They gain patients' trust by responding quickly and effectively. Undoubtedly, chatbots are beneficial. AI chatbots are particularly beneficial to the healthcare industry because they lighten workers' workloads. But setting expectations is a vital first step before implementing chatbots in the healthcare sector. Anyone who knows how to text in English language may utilize the Chatbot's mobile app or desktop version because it is so user-friendly. A medical chatbot offers individualized diagnosis in response to symptoms. In order for the medical chatbot to be able to manage all types of ailments, the efficiency of the chatbot can be increased by adding more word combinations and expanding the use of the database.

# References

Mention the sources referred for the study and development of the project. References include literature, books, websites, or any other kind of resource directly or indirectly referred for development of project and its report. All the references should be listed in **IEEE format.**

**[1]**  <https://medicalfuturist.com/top-12-health-chatbots/>