**Medbot: Conversational Artificial Intelligence Powered Chatbot for Delivering Tele-Health after COVID-19**

**ABSTRACT:**

Telemedicine can be used by medical practitioners to connect with their patients during the recent Coronavirus outbreak, whilst attempting to reduce COVID-19 transmission among patients and clinicians. Amidst the pandemic, Telemedicine has the potential to help by permitting patients to receive supportive care without having to physically visit a hospital by using a conversational artificial intelligence-based application for their treatment. Thus, telehealth will rapidly and radically transform in-person care to remote consultation of patients. Because of this, it developed a Multilingual Conversational Bot based on Natural Language Processing (NLP) to provide free primary healthcare education, information, advice to chronic patients. The study introduces a novel computer application acting as a personal virtual doctor that has been opportunely designed and extensively trained to interact with patients like human beings. This application is based upon a server less architecture and it aggregates the services of a doctor by providing preventive measures, home remedies, interactive counseling sessions, healthcare tips, and symptoms covering the most prevalent diseases in rural India. The paper proposes a conversational bot “Aapka Chikitsak” on Google Cloud Platform (GCP) for delivering telehealth in India to increase the patient's access to healthcare knowledge and leverage the potentials of artificial intelligence to bridge the gap of demand and supply of human healthcare providers. This conversational application has resulted in reducing the barriers for access to healthcare facilities and procures intelligent consultations remotely to allow timely care and quality treatment, thereby effectively assisting the society.

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| **EXISTING SYSTEM** | **PROPOSED SYSTEM** |
| **EXISTING CONCEPT:-**  One of the major challenges that India as a country faces is to cater to good quality and affordable healthcare to its growing population. The World Health Report issued by WHO has ranked India’s healthcare system at 112 out of 190 countries. This inaccessibility of healthcare facilities especially in rural India and the intricacy in accessing means of transport further causes patients to postpone their treatment, or opt for medical facilities that may be closer but at the same time are not cost-efficient and well-matched to their medical needs. | **PROPOSED CONCEPT:** -  Artificial Intelligence (AI) powered chatbots are playing a leading role by exemplifying the function of a virtual assistant that could manage a conversation via speech or textual methods. It makes use of voice queries to get answers, perform actions and recommendations according to user needs. They are adaptable to the user's individual language usages, searches, and preferences with continuing use. A conversational bot with a voice and/or chat interface can play a principal role by overcoming the current barriers towards making primary healthcare affordable, accessible, and potentially sustainable in the new digital economy. With the advent of AI, virtual assistants can be seen penetrating to the nook and corner of the world. |
| **EXISTING TECHNIQUE:-**   * **Pre-processing, Token Identification** | **PROPOSED TECHNIQUE:**-   * **Natural Language Processing** |
| **TECHNIQUE DEFINITION:-**  In the existing approach have three major steps are introduced: pre-processing, token identification and answer extraction. The pre-processing of text can also be done by using the concept of local mining. Three basic steps are involved in local mining: 1) Noun phrase extraction: In this stage all the nouns are extracted from given input. 2) Medical term Identifier: This phase includes extraction of all medical terms. 3) Normalization: In this phase, the terms are normalized to medical concepts. For a system to generate questions, the sentence is simplified by splitting the sentence and it’s compressed. | **TECHNIQUE DEFINITION:-**  Natural Language Processing (NLP) so that the computer will be able to understand the meaning of the input given by the user and perform the task accordingly. Due to the ambiguous nature of languages it is difficult for computer to always understand the correct meaning of the input given by human, which is known as Natural Language Understanding (NLU). With the help of Natural Language Understanding it is possible for conversational interfaces to understand the correct meaning of the query which contains spelling mistakes, wrong grammar, etc. |

**SYSTEM ARCHITECTURE**

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**MINIMUMSYSTEM REQUIREMENTS**

**HARDWARE REQUIREMENTS**

* PROCESSOR : DUAL CORE 2 DUO.
* RAM : 2GB DD RAM
* HARD DISK : 250 GB

**SOFTWARE REQUIREMENTS**

* FRONT END : PYTHON
* OPERATING SYSTEM : WINDOWS 7
* IDE : Spyder3

**Conclusion:**

Keeping in mind the after-effects of a pandemic and the imbalance between the demand and healthcare services currently provided, especially in rural India have tried to bridge the gap by creating a Multilingual Conversational Application with Natural Language regular on-site consultations. Text is highly used, it can thus serve as a great opportunity to bridge the gap between the availability of healthcare advice to people. Processing (NLP). This is a one of a kind personalized healthcare bot which is sensitive to the needs and understanding of the Indian rural population provides generic healthcare information along with preventive measures for prevalent diseases and ailments indigenous to our country in a user simplified language; with special emphasis on interactive antenatal and postpartum healthcare. It has additional features including home remedies, location-based diet recommendations, age, and gender-specific health check-up advice, emergency helpline numbers, and can be linked with a real-time messaging application like WhatsApp. The aim of this application is not just to prevent malicious infectious diseases in the grappling population but to help achieve overall wellness. Our application is quite reliable in detecting various common diseases, suggesting home remedies and local food diets as long as problems and symptoms faced are well communicated by the user to the chatbot, and leading questions from the chatbot are appropriately answered.

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