HEALTH CARE BOT FOR GENERAL DISEASES USING MACHINE LEARNING

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Abstract— Healthcare is seen as one of the most important areas for networked enterprise applications & services. Much effort is put into IT to achieve better efficiency & quality of service. Especially the fields of patient general & preventive education are associated with desirable outcomes like greater satisfaction and compliance of the patient. This work addresses the issue of more efficient handling of doctor-patient relationship. Health Care Bot for General diseases Patients Using Machine Learning uses agent technology to extend patient-doctor relationship beyond the physical & logistical limitation of face-to-face consultations. Objective was to give patients possibility to let them (pre)access & enter information speaking "natural" language and evaluate the impact. Second objective was to provide a conversation overview & screening objective for the doctor.
Keywords— Health, Machine Learning, Disease

I. INTRODUCTION

Normally Users are not aware about all the treatment or symptoms regarding the particular disease. The Health Care bots functioning depends on Natural language processing that helps users to submit their problem about the health. The User can ask any personal query related to health care through the chat-Bot without physically available to the hospital. Query is sent to Bot and gets related answer and display answer on System. The System's major concern behind developing this Machine Learning based platform is analysing customer's sentiments. Verbal exchange facilitates plenty to improve one's intellectual health. The problem receives partly solved if a affected person can confide in someone what they may be going through, but every now and then none can be available at the proper time. That is why most health care bot is introduced.

The main motive of the scheme is to build the language hole among the user and fitness carriers via giving immediate replies to the Questions asked by using the person. Nowadays people are more likely hooked on internet however they are not issue approximately their private health. They avoid stepping into hospital for small trouble which might also come to

be a primary sickness in future. Setting up query solution forums is becoming a simple manner to reply those queries as opposed to surfing through the listing of doubtlessly relevant file from the net. The various present structures have some problem such as there may be no on the spot response given to the sufferers they should await experts acknowledgement for a long term. A number of the methods may rate amount to perform live chat or telephony conversation with medical doctors on line. This machine allows laptop to verbal exchange among human to pc by way of using natural language processing (NLP). The great quantity of statistics associated with diseases is collected from the web and stored its database lets in these bots to offer correct and efficient records based totally on the person's requirements. From the messages of the user, health care bot collects sufficient key phrases and starts off evolved leading the verbal exchange through asking questions to the consumer and trying to shortlist some illnesses that the consumer may be suffering. Once it gets enough quantity of statistics, it reveals the maximum likely ailment and can respond to their worries with facts approximately remedies, signs and so forth, even by means of suggesting remedies.

Most social insurance associations, these days, have an inactive relationship to their customers with regards to correspondence. The customer look through the site to discover data and it's even difficult to explore to arrive at the exact data they need. Most associations, including emergency clinics and clinical practices, have done little to propel their customer interchanges frameworks. Frequently this incorporates an inquiry and answer page on a site. This is constraining and patients are not extremely happy with the outcomes. We can beat these confinements with a health care bot, where the discussion goes to and from, permitting the customer to explore towards data they need with extraordinary accuracy. Utilizing a health care bot the buyers not just get fast and simple access to data yet in addition an intuitive stage that is all the more captivating and individual. Health care bot goes about as a data supplier which works progressively, responding to the inquiries on the spot. This is productive, responsive and comprehensive. A health care bot can direct the concerned patients by comprehension and surveying their side effects that they are encountering and distinguish the consideration that they need. Health care bots help to improve the patient experience. They fill in as a client care group. Furthermore, they can help in setting up a meeting with the specialist, anticipate medical issues dependent on side effects and give day by day wellbeing tips to improve the patient's way of life. When health care bot innovation is coordinated with existing famous web benefits that give social insurance administrations, it can be used safely by a much bigger crowd. Patients will simply need to put their question to the bot which is utilized for visiting. The Design of the proposed framework gives an approach to have a casual correspondence between a human client and a Computer framework that utilizes a characteristic language, accordingly upgrading client experience and giving new chances to improve the client's commitment process and operational effectiveness by decreasing the run of the mill cost of client care.

II. LITERATURE SURVEY

Literature survey is the documentation of a comprehensive review of the publishes and the unpublished work from secondary sources data in the areas of specific interest to the researcher. The library is rich storage base for secondary data and researchers used to spend several weeks and sometimes months going through books, journals, newspapers, magazines, conference proceedings, doctoral dissertations, master ,s thesis ,government publications and financial reports to find information on their research topic. With computerized databases

now readily available and accessible the literature search is much speedier and easier and can be done without entering the portal of library building.

[1] Stefan Schaffer: "Towards Chat bots in the museum(chim)".

Chim develops a practicable technical solution for the use of chatbots in the museum environment. A chatbot is a computer program that attempts to simulate the conversation of a human being via text or voice interactions . In the museum context chatbots offer great potential, as existing "pain points" can be eliminated: in contrast to personal tours, chatbots are always available. Today's digital visitor guidance systems offer only "oneway communication" and are not able to respond to questions from the visitor. Chatbots have the potential to respond meaningfully to the user's input if the input is processed properly. Conversations with museum *visitors showed that they often have specific questions about certain objects. Classical* audioguides can not answer specific questions. In the museum a chatbot could be the expert you can take with you, answer questions and provide further information. The aim of Chim is to explore the usability of a chatbot as an interactive system for knowledge and learning, as well as for effective access and the comprehensible presentation of museum information. A central question is therefore how the existing information must be structured in order to relate to the visitors' questions. Chim develops new solutions for providing information and explores how the latest research results in the field of intention detection and dialog management can be utilized for chatbots in the museum context. Specifically, the following research fields of human-technology interaction are to be investigated.

[2].Randolph Ford: "Real conversations with artificial intelligence".

This study analyzed how communication changes when people communicate with an intelligent agent as opposed to with another human. We compared 100 instant messaging conversations to 100 exchanges with the popular chatbot Cleverbot along seven dimensions: words per message, words per conversation, messages per conversation, word uniqueness, and use of profanity, shorthand, and emoticons. A MANOVA indicated that people communicated with the chatbot for longer durations (but with shorter messages) than they did with another human. Additionally, human–chatbot communication lacked much of the richness of vocabulary found in conversations among people, and exhibited greater profanity. These results suggest that while human language skills transfer easily to human–chatbot communication, there are notable differences in the content and quality of such conversations.

[3] Abhishek Mishra: "Automated Medical Chatbot".

This study aims to present a design for medical chatbot that provides diagnosis and remedies based on the symptoms provided to the system. The system will be able to measure the seriousness of the diagnosis and if needed, it will connect the user to a doctor available online. The proposed Medical Chatbot can interact with the users, giving them a realistic experience of chatting with a Medical Professional. Our Chatbot can detect human message patterns using AIML (Artificial Intelligence Mark-up Language) which is a mark-up language based on XML to build AI applications [1]. It retrieves keywords from the initial messages to know the possible medical problems that the user has, based on their input. There are few Medical Chatbots that already exist, but they do not provide users with medication to any illness but connect them with a Medical QA Forum and show them similar questions to their symptoms that doctors may have previously answered. The system

was compared with Health Tap which is a popular Facebook Messenger Chatbot. Our motive is to show that the proposed medical Chatbot could be a better alternative to many already existing Chatbots in the domain of medicine.

[4] Keerthana.S: "Hexabot: "A Text-Based Assistive Chatbot To Explore Library Resources".

A Library maneuvers with a social thought of providing valuable information resources to people who can't afford an extensive collection of books for professional assistance. It is one of the major assets in a college. Thus a college focuses on maintaining and managing the details of the library data with at most efficacy. The value of any information resource can be judged based on its knowledge and utility and not on monetary. Hence it is necessary for an institution to take care of providing the required support to teachers and students to effectively use the resources in a library. The main objectives of this project are, Explore the Library resources to the users by adapting an Artificial Intelligence Technology easy communication between the user and the chat bot. Anytime and Anywhere. In recent times, chat bots have reduced the need for human intervention. Artificial intelligence and machine learning have accelerated the evolution of chat bots to blur the line between human and bot style of interaction. A chat bot is a computer program or artificial intelligence which conducts a conversation via auditory or textual methods .Chat bots are generally used in systems which involves chatting with users to either acquire information or provide the service as information to them. In certain Chat bots natural language processing is used, but many of the Chat bots have their reply stored in database which they retrieve when they receive an input from user . According to Finance Digest, AI will handle 95% of the customer interactions by 2025, which will free up the need for human interaction. Such advanced AI technology would create a self-learning system for chat bots, where chat bots can learn to respond without any scripts for every instance of a conversation. Chabot's helps people by reducing the time they navigate in Web by easily providing the information they search. Building customer support is one of the major workflow for any business happening around the world. The growth in technology has leveraged the customer expectations like need for a 24/7 service customer support, instant response and answers for even simple queries which requires huge manpower and knowledge. Chat bots are solutions build based on adapting AI technology to reshape the customer service domain. Imagine for a minute, where instead of a human being at a customer support, Chat bots will help us provide the service for the customer.

[5] Dangpham: "Lead Engagement by Automated Real Estate Chat bot"

Recently, automated chat bot has been increasingly applied in real estate industry. Even though chat bots cannot fully replace the traditional relation between agents and home buyers, they can help to engage potential clients (or leads) in meaningful conversations, which is highly useful for lead capture. In this paper, we present an intelligent chat bot for this purpose. Various machine learning techniques, including multi-task deep learning technique for intent identification and frequent itemsets for conversation elaboration, have been employed in our system. Our chat bot has been deployed by CEO K35 GROUP JSC with daily updated data of real estate information at Hanoi and Ho Chi Minh cities, Vietnam.

III. PROPOSED METHOD

General diseases patients sometimes hesitate to share their problems with others. General diseases bot will let them share their problems regarding General diseases and their helpless situation. The Health Care Bot is increasingly being used to handle tasks, free humans and make them focus on their health. Health Care Bot lets the users interact without any barriers; it impersonates the human conversation either through text or audio. The constant communication with the bot can bring a positive attitude to the patient. It can learn from previous conversations and get some valuable experience, and become more active as time passes by. A User can chat with the bot like how he can chat with a human. In order to build an intelligent Health Care Bot, there are a lot of program inputs out there that are accessible in the open and make.

Advantages of proposed system

- Providing support.
- General diseases patients sometimes hide their problems, General diseases bot will let them to share their problems regarding General diseases in their helpless situation.
- The constant communication with bot can bring a positive attitude to the patient.
- Getting instant response.
- Being available 24/7.
- Easy to use.

IV. RESULTS AND SNAPSHOTS

General diseases patients every so often hesitate to share their issues with others, most General diseases bot will allow them to share their problems concerning General diseases and their helpless scenario. The Health Care Bot is an increasing number of getting used to address duties, unfastened humans and lead them to cognizance on their health. Health Care Bot lets the customers engage without any barriers; it impersonates the human communicate both through textual content or audio. The steady communication with the bot can carry a high-quality mind-set to the affected person. It could study from previous conversations and get some valuable revel in, and grow to be more energetic as time passes through. A person can chat with the bot like how he can chat with a human, to be able to construct an clever Health Care Bot, there are quite a few software inputs obtainable which might be available within the open and make.
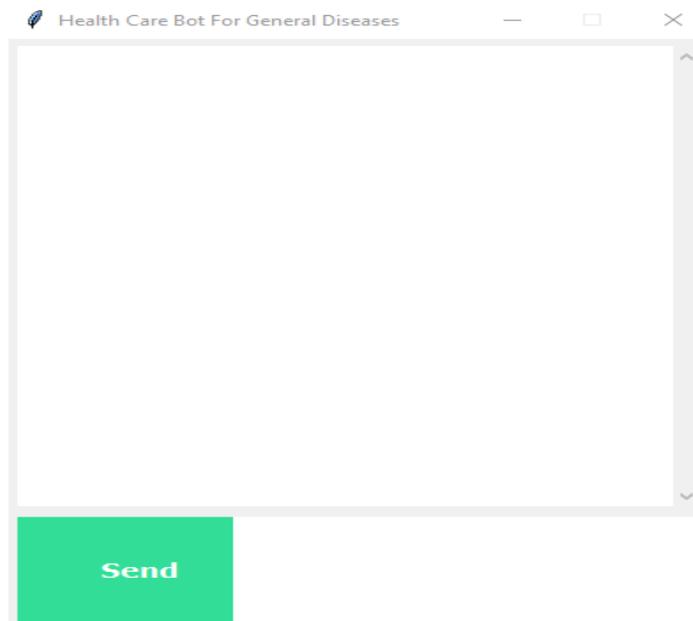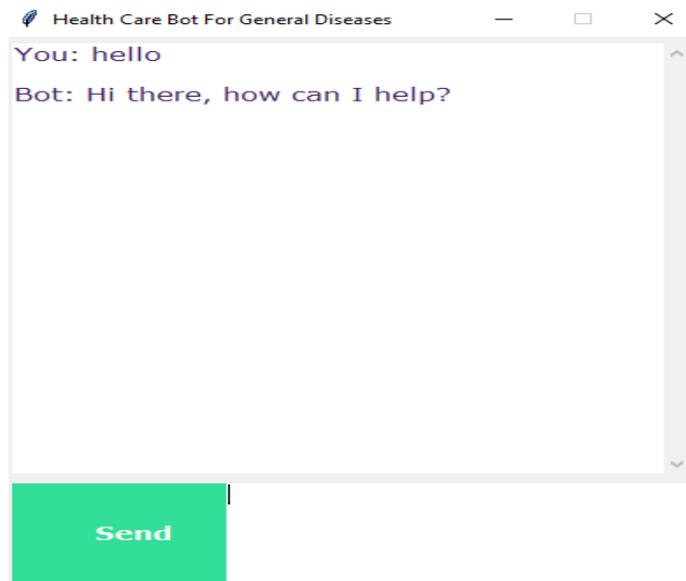
Fig 4.1 Health Care Bot Catalog
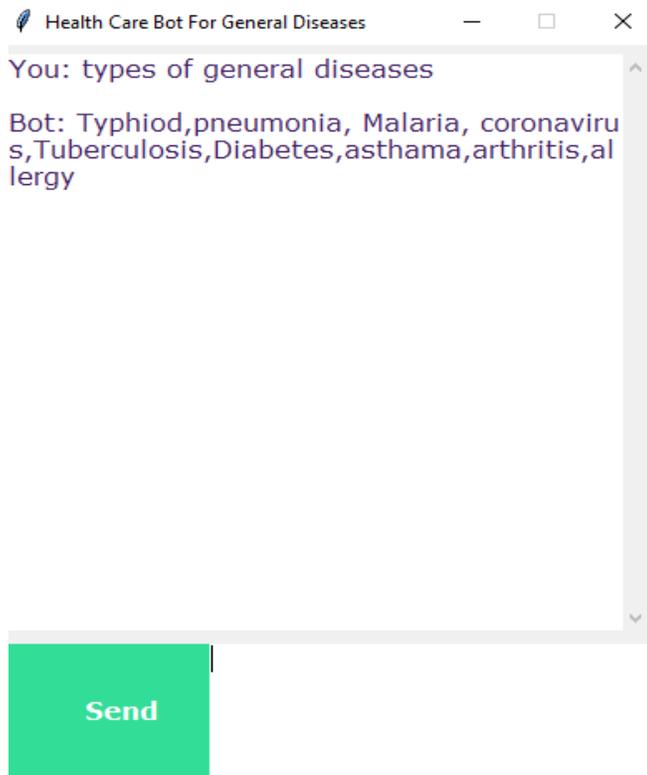

Fig4.2 Greeting Conversation

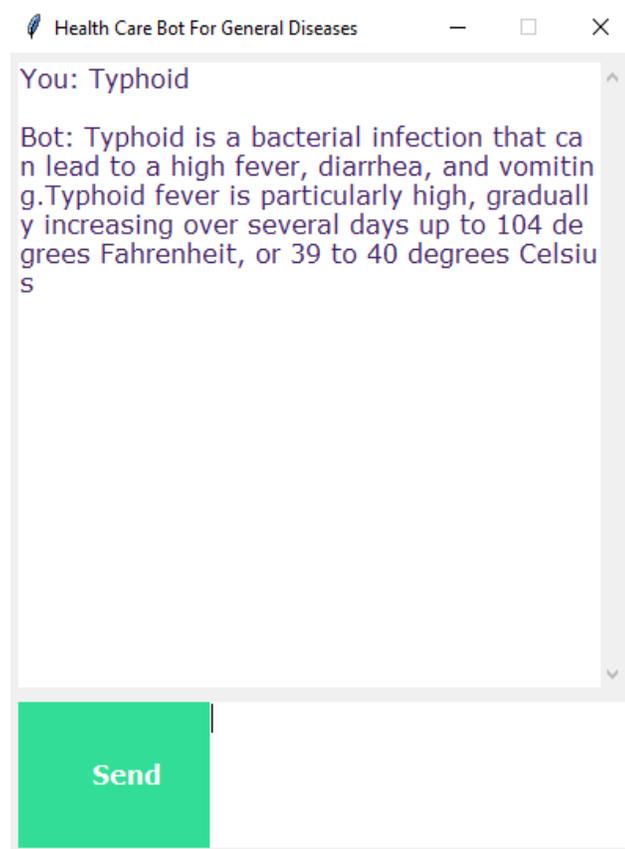Fig 4.3 Conversation Regarding Types of General diseases
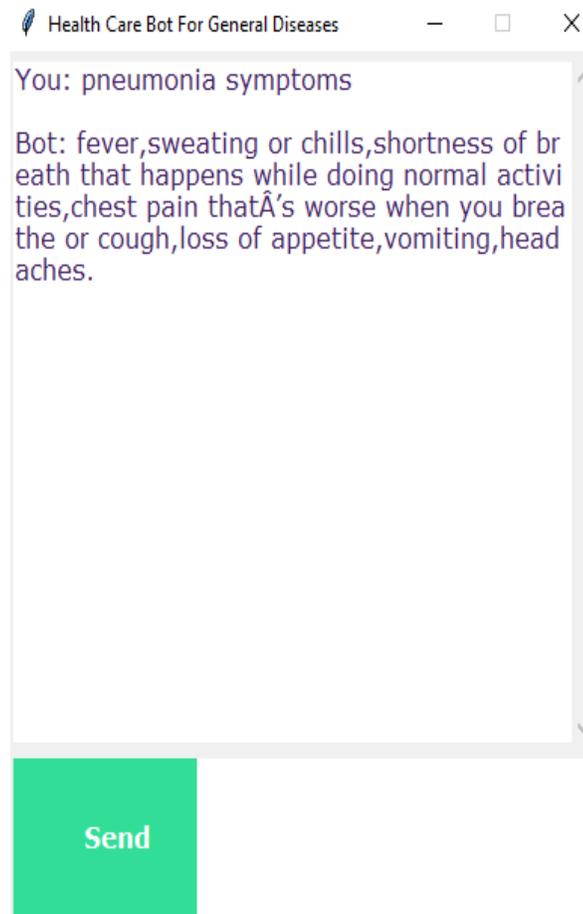

Fig4.4 Conversation Regarding Typhoid
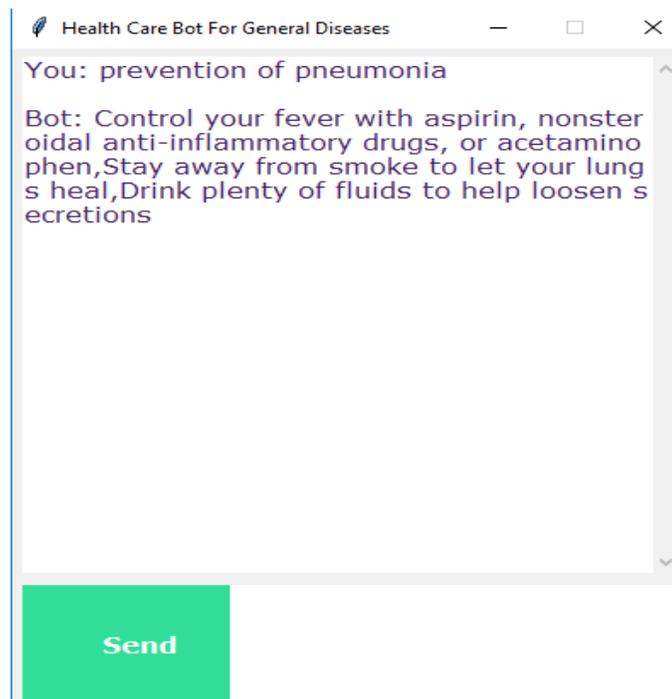
Fig 4.5 Conversation regarding symptoms of Pneumonia
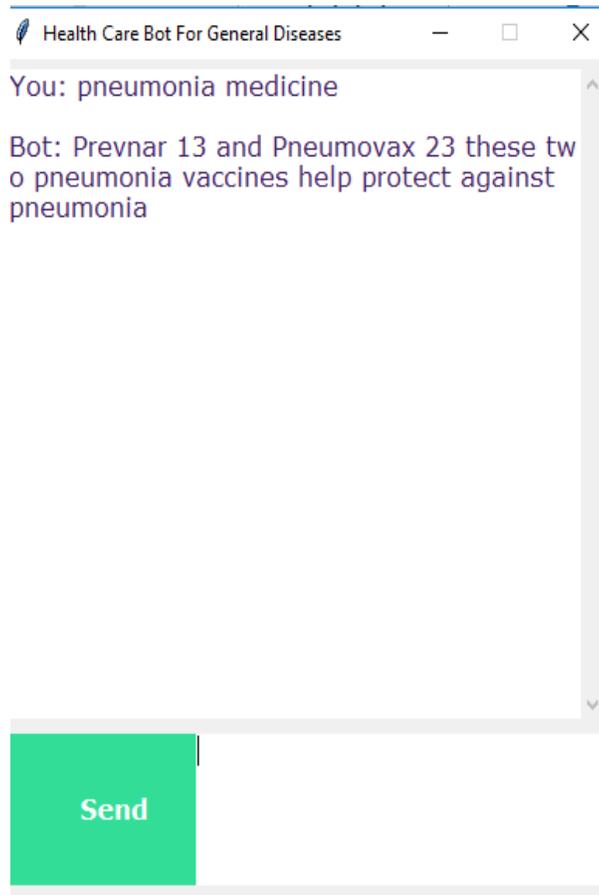

Fig 4.6 Conversation Regarding Prevention Of pneumonia
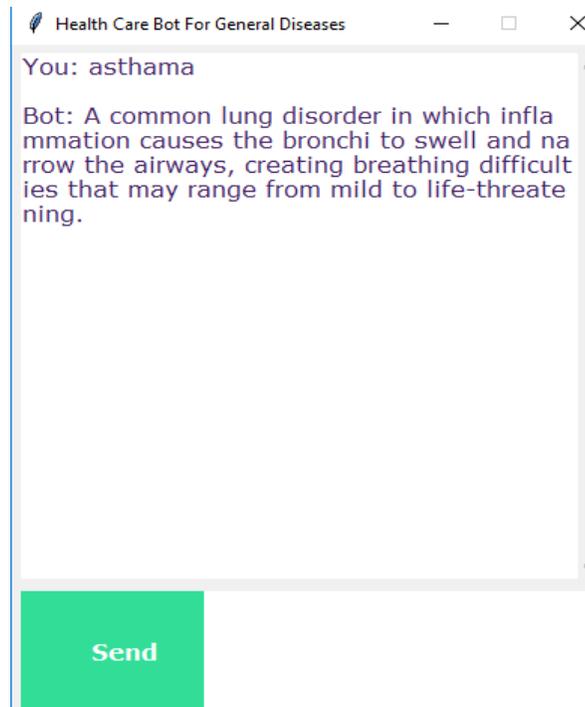
Fig 4.7 Conversation regarding medicines of Pneumonia

Fig 4.8 Conversation Regarding Asthma

V. CONCLUSION

This paper explains the healthcare for the Health Care Bots and how they get evolved. It decided that the contemporary Health Care Bots carry out at a completely high popular to provide a dependable reaction to users in comparison to the conventional Health Care Bots. The most General diseases Health Care Bot might have a more enormous have an effect on at the life of General diseases patients and might help them to clarify their doubt concerning most General diseases. Unlike present Health Care Bots which focused on various domain names of healthcare other than most General diseases, this Health Care Bot can entered best and help in General diseases. Through an interactive session with this most General diseases bot, it is viable for the patients to acquire relevant records regarding General diseases. This is the nice solution for folks who are busy with their job schedules. They do not want to attend within the queue for hours to get an appointment with a physician every time alternatively they are able to chat with the bot. also, it might be a splendid relief for folks who want to discuss their most General diseases-associated troubles. Our Health Care Bot consists of a number of General diseases-related information collected from numerous General diseases boards which could make our Health Care Bot greater dynamic and unique.

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