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Tool for Management of Human And Robot using Medical ChatBot

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Abstract: A decent existence requires access to quality healthcare. It is extremely important to our day-to-day existence. Nevertheless, getting a doctor's appointment for each health issue is exceedingly difficult. The goal is to create a medical chatbot using computer science that will propose a doctor who specializes in a certain ailment. This can make it easier to increase access to medical data via chatbots. Chat bots are software applications that converse with users by using language. The chatbot keeps the data within the data to identify the sentence keywords, create a call to action, and respond to the question. Conversational User Interfaces (CUIs) let users interact with computers in a direct, human-like way. The way we engage with computers and applications is radically altered.CUI is utilized in this study to train data and a variety of packages that help us provide suitable satisfactory outcomes For the purpose of recovering findings, we will combine machine Learning with Natural Language Processing in this chat bot. Care plays an important role in our daily lives; whenever someone is ill, they visit their general practitioner or a nearby clinic to learn more about the issues they are facing. In recent years, a number of organizations and businesses have worked with hospitals to produce support that could help doctors and medical staff deal with patients in a better manner and reduce their labor by using technology; not only does this help the project's main goal is to help you convey information that you have mined more effectively (information) using Access to timely, easy, contextual information is required for both customers and staff.

Keywords: Chat Bot System which can make suggestions to help people with correct decision making without making a failurre of treatment in initial stages of curing disease for hospital and people benefits.Making Faster Progress and results of health development in good side.

I. INTRODUCTION

Computers educate us, entertain us, and help us in many different ways. A chat bot is a piece of software that mimics intelligent speech or text communication. However, this essay only addresses email.With the aid of people or web tools, this system can reclaim its knowledge and learn new skills on its own.This implementation is crucial since information is processed beforehand. The device implementation uses a chat bot to react to user inquiries using the question and response protocol. When patients cannot see doctors or consultants when they are in need, this approach was developed to help them save money and time in hospitals. The user's query would also influence the response to the question. as the database of knowledge.The crucial words are taken out of the text and applied to certain sentences. If a response will be supplied or identical responses will be displayed if a match is discovered or a significant discrepancy is discovered.

II. RELATED WORKS

To develop Medical Chat bot System which manages initial stages of medical consultation and treatment to help everyone decide the correct problem.Also can access assistance to solve the problem from chat bot using a updated data set or recommends to opt for doctor consultation assistance. This reduces the initial stage treatment failure, where every individual can get detailed solution to solve in a structured way of every stage of their mediacal treatment.

III. EXISTING SYSTEM

We use chat bots and examine the attendant challenges created by using these new technologies during such health crises, which are largely caused by pandemics. We believe our results will help researchers better understand the layout and application of these innovative technologies. Disadvantages are Artificial intelligence, Chat bot, LSTM algorithm, machine learning, natural language processing, query processing.

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IV. PROPOSED SYSTEM

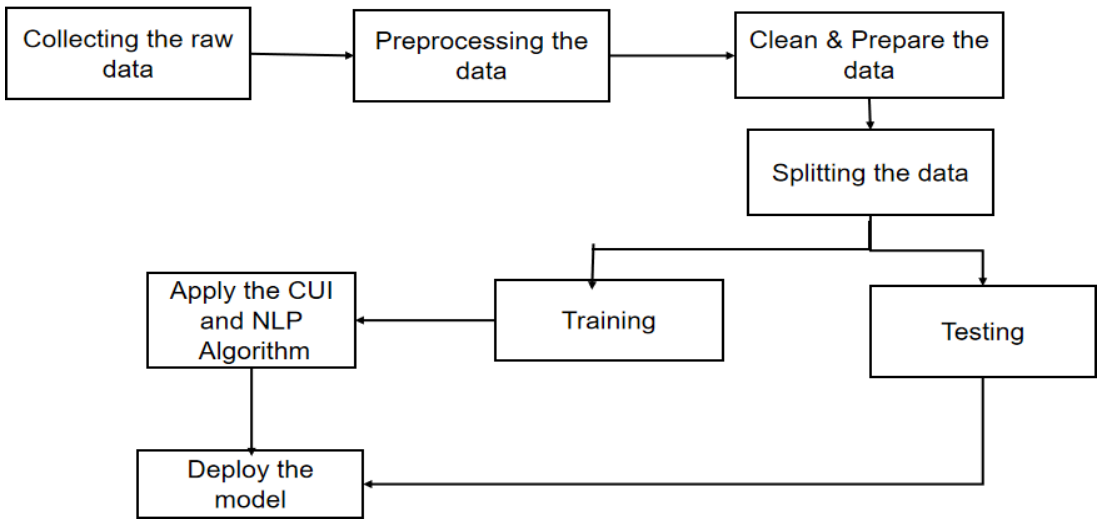
We will propose this project CUI is utilized in this study to train data and a variety of packages that help us provide suitable satisfactory outcomes For the purpose of recovering findings, we will combine machine Learning with Natural Language Processing in this chatbot.Advantages are presenting the chatbot powered by machine learning,The chatbot will indeed be built using NLP,A shorter travel time to the doctor's office,Less money is wasted on pointless procedures and examinations,Push a button for quick and fast access to the doctor.

V.IMPLEMENTATION AND RESULTS

The chat bot potrays the data which it consumes and process it to make decisions.To do a quick report generation of patient position of disease detection and make suggestions regards according to a data set updated live.
Can be a way of analysing problems and make solution accordingly.

Software Specification are
Operating System : Windows 11
Coding Language : Python 3.11 Development Environment : Python IDLE

OVER ALL ARCHITECTURE:-



PRE-PROCESSING THE DATA
Format, clean, and sample from your chosen data to organise it. There are three typical steps in data pre-processing:

Formatting:
It's possible that the format of the data you've chosen is not one that allows you to deal with it. The data may be in a proprietary file format and you would like it in a relational database or text file, or the data may be in a relational database and you would like it in a flat file.

Cleaning:
Data cleaning is the process of replacing missing data. There can be data instances that are insufficient and lack the information you think you need to address the issue. These occurrences might need to be eliminated.

Sampling: You may have access to much more data than you actually need that has been carefully chosen. Algorithms may require more compute and memory to run as well as take significantly longer to process larger volumes of data. You can choose a smaller representative sample of the chosen data, which may be much faster for exploring and testing ideas, rather than thinking about the complete dataset.

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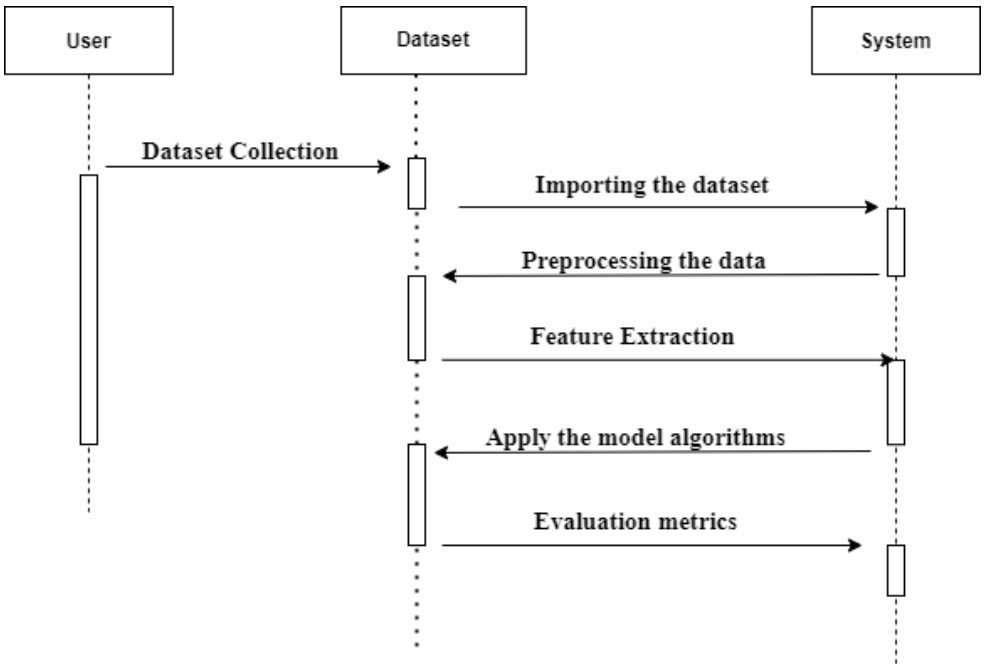
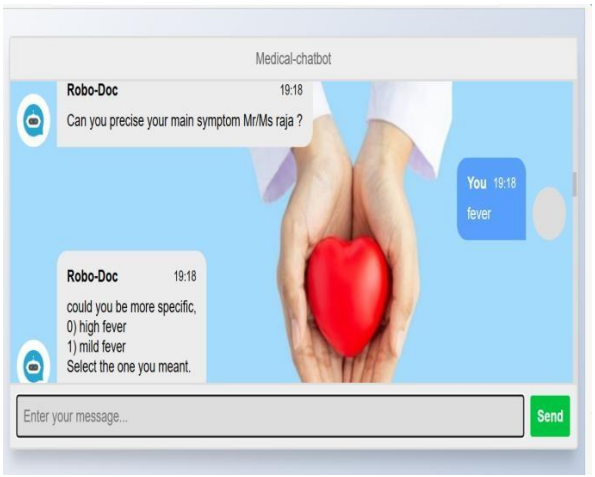


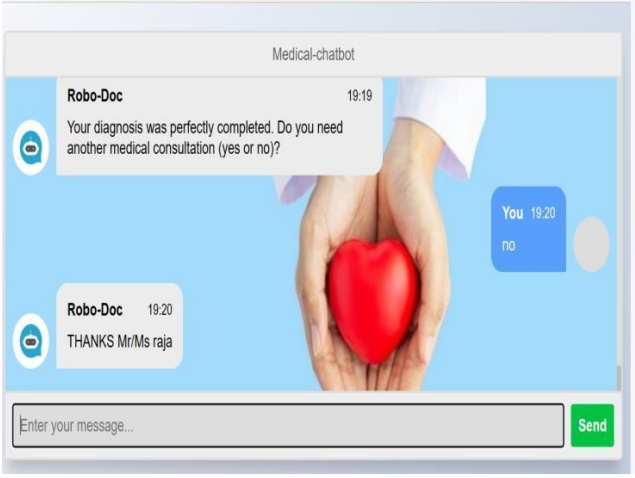
EXTRACTION OF FEATURES

The next step is to A process of attribute reduction is feature extraction. Feature extraction actually alters the attributes as opposed to feature selection, which ranks the current attributes according to their predictive relevance. The original attributes are linearly combined to generate the changed attributes, or features. Finally, the Classifier algorithm is used to train our models. We make use of the acquired labelled dataset. The models will be assessed using the remaining labelled data we have. Pre-processed data was categorised using a few machine learning methods. Random forest classifiers were selected.

EVALUATING THE MODEL

The model development process includes a step called model validation. Finding a model that best represents the data and predicts how well the model will perform in the future is useful. In data science, it is not acceptable to evaluate model performance using the training data because this can quickly lead to overly optimistic and over fitted models. Hold-Out and Cross-Validation are two techniques used in data science to assess models. Both approaches use a test set (unseen by the model) to assess model performance in order to prevent overfitting. Based on its average, each categorization model's performance is estimated. The outcome will take on the form that was imagined. graph representation of data that has been categorized.Proposed Approach Steps are, We start by using the dataset of Medical Chatbot Model,Filter the dataset in accordance with the needs, then construct a new dataset with attributes that correspond to the analysis to be performe, Pre-process the dataset before using it, Distinguish training from testing data, Analyze the testing dataset using the classification algorithm after training the model with training data, You will receive results as accuracy metrics at the end.





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VI. DISCUSSION

In future the system can be improved in terms of accuracy and performance in future with better technologies. The other enhancements that can be added to the system is that if a person gets caught in a signal and gets fined the same person should not be fined for violation of helmet in another signal in the same day. This system can also be implemented to detect traffic signal violations through which if a rider crosses the signal when it is red then the number plate can be saved and fine can be sent in the same way.

VII. CONCLUSION

We should conclude that this approach yields accurate results as a result. Since we are utilizing a sizable dataset, we should anticipate better outcomes. As a result, we developed a tool that lets users identify illnesses by inputting their symptoms. Alhough chat bots are a technology of the future that has not yet reached its full potential, they are likely to be around for some time given their growing popularity and appeal to businesses. Machine Learning has transformed how companies interact with their customers. It's wonderful to watch a new technical domain develop while breaking the previous hurdle, with new tools for constructing various types of chat bots being introduced.

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