A.I BOT FOR MEDICAL ANALYSIS

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Abstract: As In this technical era, visiting & consulting Doctor for HealthCare consumes time. Specifically, if a person need advice on any of the non-hazardous problem. By examining such scenario it is better to use latest technology like Artificial Intelligence and Machine Learning to reduce the time consumption and integrate technology with day to day life of every human. A ChatBot/ChatterBot aims to make conversation between both human and machine by providing Graphical User Interface to end user. The machine has embedded knowledge base to identify the user Expression with respect to user input. After identifying user input query parsed over the database(RDBMS), and response call sent from machine to user. User is asked about their symptoms till they want to share and then decision tree algorithm helps to gather data & respectively generate the exact result of prescription to be suggested for symptoms of end user. The database has been employed as knowledge storage and interpreter has been employed as stored programs of function and procedure sets for pattern-matching requirement. The interface is standalone which has been integrated on messenger(Facebook Messenger) using API keys.

IndexTerms: **Diseases Diagnosizer , Bot for medical analysis , A.I bot**

1. INTRODUCTION

This project is based on the technique called chat bot which comes under artificial intelligence. In today's busy life, due to our busy schedule sometimes it is not possible to go to clinic/hospital and meet the doctor immediately for the treatment and sometimes in emergency we also need treatment during late night and we were unable to reach the nearby clinic or the hospital so using this chat bot a user can get the treatment by knowing the name of prescribed medicines. A bot is software that can respond back to user inputs, relying upon the input keywords . It is a computer program that simulates human conversation , or chat , through artificial intelligence .
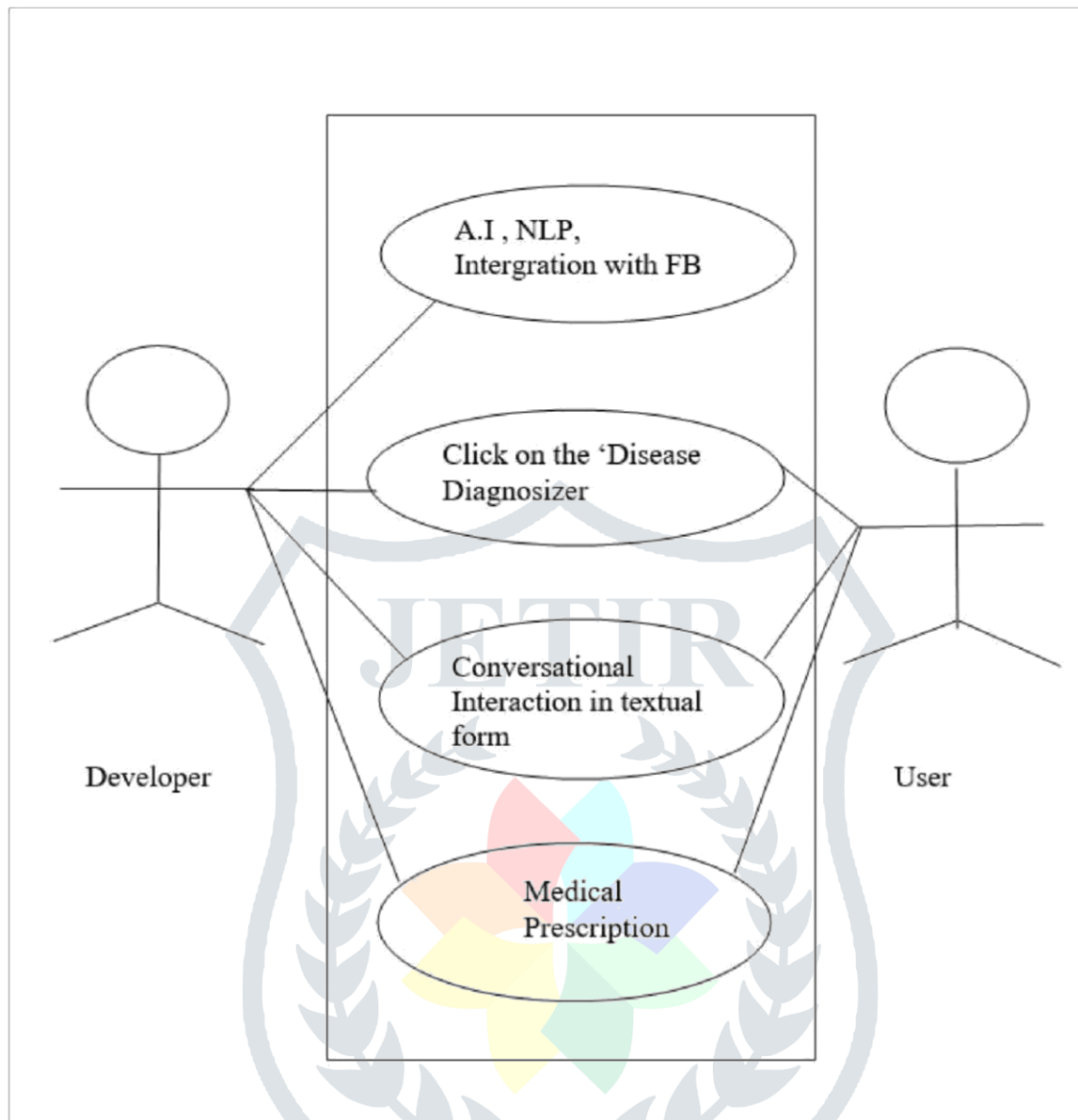
This A.I bot for medical analysis will have functionalities and its working as explain below. This A.I bot for medical analysis firstly will have some follow-up questions which will include Name , Age, Symptoms and as bots can be integrated to platforms such as Facebook, Instagram, twitter, linked In so the user's which will use the bot on these platforms the user information is automatically taken by the bot as the user is already login into these platforms.

As all these information given by the user in the form of text is gathered then the symptoms which are entered by the user are taken as input in this A.I bot and as an output the bot pull a reply with the help of data stored in the database. In reply the bot will give the name of the recommended medicine based on the symptoms provided by the user , In this way the bot will wok.

2. PROPOSED SYSTEM

To overcome the disadvantages of an existing System the A.I BOT FOR MEDICAL ANALYSIS is developed to interact with the users get their queries. Later on processed by parsing some parameters of their disease/Symptoms. After that examining the causes and the critical conditions A.I BOT will produce a sophisticated result.

Case 1:If the symptoms/disease is in minor condition A.I BOT will gives rise for medication/quick treatment. Case 2: If the symptoms/disease is in critical condition A.I BOT suggest the nearest specialist for the same.

This A.I bot for medical analysis consist of 5 module
- o   Creating a Bot using Pycharm
- o Integration with Facebook
- o Medical Information Gathering
- o Enhansing UI
- o   Training the bot

2.1 Creating a bot using Pycharm :

Here a bot is appeared on the facebook page where it will be made available for the people. In this module we are using pycharm ide (integrated development environment) for implementing the bot

2.2 Integration with facebook :

After the bot implementation it is integrated on Facebook

2.3 Medical Information Gathering :

Medical data such as name of the disease , symptoms and name of the medicine based on the symptoms will be gathered in this module.

2.4 Enhansing UI :

There are several medication available in the market with the same name with different brands. This may create the huge conflicts to client. To reduce such conflicts and to provide exact prescription for particular reason, we implemented the image providing.

2.5 Training the bot :

Here the bot will undergoes a training session where it will use its experience to interact with the user more efficiently.As an output this bot will pull a reply by interacting with user and it will provide the name of the medicine based on symptoms with the help of data stored in the cloud.

3. PROBLEM DEFINITION

The problem occurs sometimes when the people do not get treatment at the right time due to their busy schedule and after that they may suffer more complication regarding to their health. The problem arises due to the busy schedule of the people it is not possible for the people to go to clinic or hospital and meet the doctor immediately for the treatment of the disease.

In today's busy life before meeting to a doctor we have to take to the appointment and according to that schedule time only we can meet the doctor thererfore many people are not able to attend the allocated time for meeting the doctor due to their busy schedule , it is not possible to physically appear at the clinic for the treatment during late night ,many people found difficulties to reach near by medical store /hospital.

The above problem overcome by in our chatbot . It will help the needy people/user by providing the immediate treatment as the name of suitable medicine based on the symptoms entered by the user can get immediate action to reduce the complication of diseases .

4. LITERATURE REVIEW

4.1 Existing System

Existing system was carried out through mhealth application. Maintenance of the medical records in the existing system is difficult. Lot of time is taken to search for a particular medical record. There is a chance of occurrence of errors. Updating and retrieval of information in this existing system takes more time. mhealth is an application which is android as well as available on ios. In order to serve the application to client/patient of mhealth they included everything from medication adherence, vital sign monitoring, self - reporting of symptoms, telemedicine consults, and behavior coaching etc.

4.2 Disadvantages of Existing System

The disadvantages of the existing system are:
- Chance of occurrence of errors.
- The result have been mixed.
- The user getting too much complexity for handling application.
- Maintenance of the medical records is difficult.
- Time consuming process

4.3 Technology Used

- **Artificial Intelligence :** Artificial intelligence is a area of computer science that creating the intelligence machine that machine behave or work like a human .Artificial intelligence is a technology that is already impacting how user communicate or interact with are affected by the internet.

- **Natural Language Processing:** Natural language is a subtitled of computer science and engineering and artificial intelligence that concerned with the interaction between computer and human language . It is the ability of a computer program to understand human language.

- **Machine Learning :** Machine learning is the application of artificial intelligence that provide the system to automatically learn or improve experience without being explicit program.

- **Python :** Python is a programming language that lets you work quikely and integrated system more efficiently Python interpreters are available for many operating system. CPython, the reference implementation of Python, is open source software and has a community-based development model, as do nearly all of Python's other implementations. Python and CPython are managed by the non-profit Python Software Foundation.
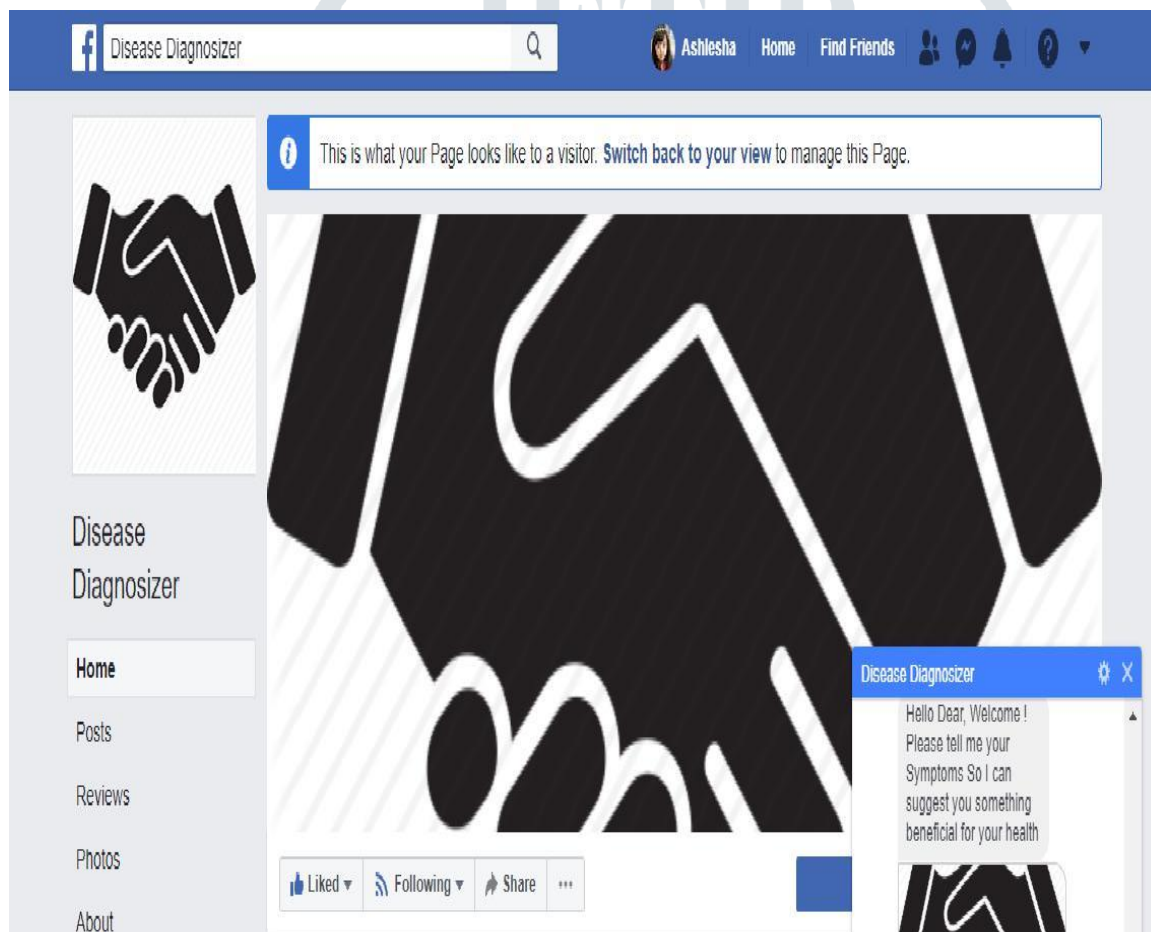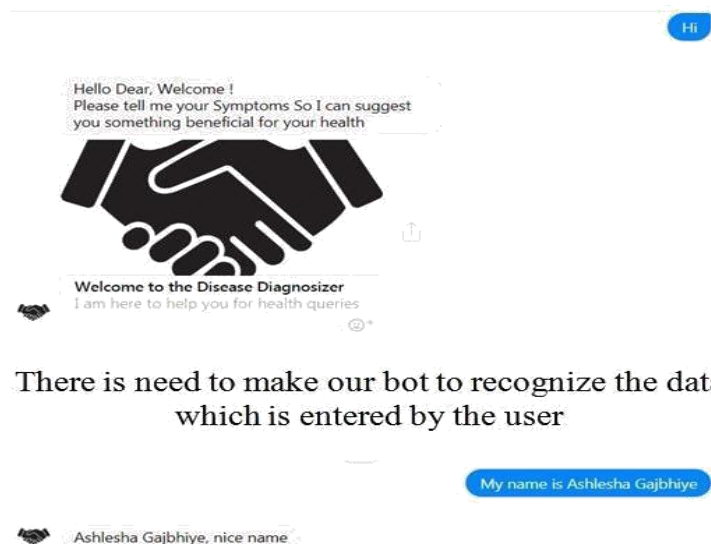
5. RESULT

figure 1 : disease diagnosizer bot

figure 2: recognizing the data entered by user
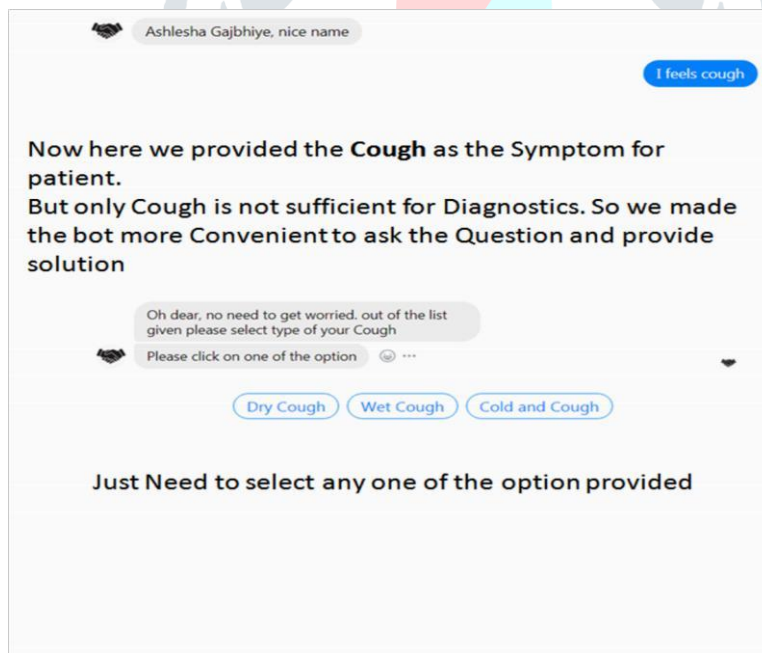

figure 3: making bot more convenient conversational entity
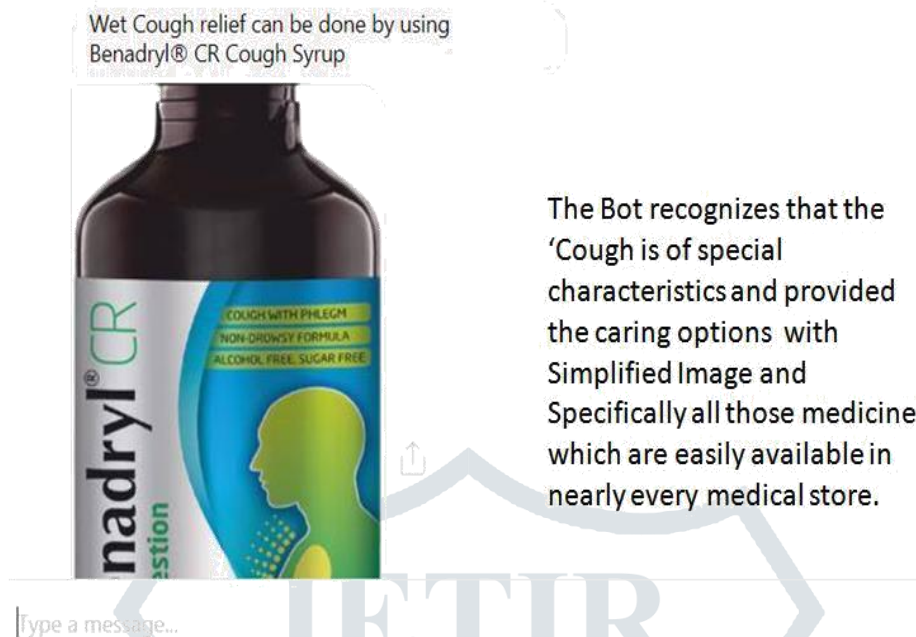
figure 4: Providing recommendation to user

6. CONCLUSION

To conclude, 'Disease Diagnosizer' i.e A.I chatbot for Medical Analysis is simply a chatbot which is integrated to the Facebook messenger so that it can be available anytime and user can interact with this chatbot just by connecting to the internet. Our team is successful in making the chatbot where user can have a conversation in textual form with the bot the bot replies by using its intelligence and the main goal of this bot is to help the needy people by giving the medical prescriptions based on the symptoms entered by the user. The performance of the bot can be enhance by adding more rule and providing more real time data , gaining the experience and training the bot to work like a human.

> Basically we learnt to work in team.
> Learnt about how to apply Artificial intelligence and natural language processing.
> Learnt about Python technology, its components and ways to implement them.
> Learnt to work in pressure and to be patient.
> Learnt about how to use cloud storage and how to integrate the bot into social media platforms.

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