# Artificial Chatbot For HealthCare

## Project Synopsis

**Version 1.3**

Project Work Phase-1 (ECS 799)

**BACHELOR OF TECHNOLOGY (CSE)**

PROJECT GUIDE:

**Mr. Aaditya Jain**
**(Assistant Professor)**
**CCSIT**

SUBMITTED BY:

**Raushan Raj (TCA1809060)**
**Nameera Meraj (TCA1911003)**
**Arjun Sharma (TCA1809067)**

October 2021


**COLLEGE OF COMPUTING SCIENCES AND INFORMATION TECHNOLOGY**

**TEERTHANKER MAHAVEER UNIVERSITY, MORADABAD**

**Table of Contents**

# 1 Project Title

**Artificial Intelligence Chatbot for HealthCare**

# 2 Domain

*The Domain covers Data Science and Machine Learning.*

***Data Science:*** Data science is an interdisciplinary field that uses scientific methods, processes, algorithms, and systems to extract knowledge and insights from many structural and unstructured data.

***Machine Learning:*** Machine learning is a method of data analysis that automates analytical model building. It is a branch of artificial intelligence based on the idea that systems can learn from data, identify patterns, and make decisions with minimal human intervention.

# 3 Problem Statement

In Today's World Scenarios traditional method to getting appointment for doctor, standing in long queues for number of hours also doctors didn't talk as if patient want more consult regarding their health. Also Patient health record history, their previous prescribed medicine and what's their suitable medicine all need an IT solution in terms of Artificial Intelligence..

# 4 Project Description

The purpose of this project is to provide the admin has to collect the patient's medical history of records and filter it appropriately by applying data preprocessing techniques. Admin's functionalities are to collecting the appropriate medical records of the patients, handle missing values, handling categorical values, creating sparse matrix representation, Feeding data to the autonomous pipeline for predictions, selecting and training an appropriate machine learning algorithm.

The visitor can perform the basic task of the visitor is to access the Chatbot from the front end and reply to its queries with a binary response (Yes/No). The visitor will be shown a confidence interval related to a certain prognosis which needs to further investigated and experimented with for better results. The first step is to start their procedure, then one by

one all the symptoms come in client's screens. They will have to reply with yes or no answer.

Once a problem is found then they will have to click yes, then the patient can see their problem on screen. The best part is that it will provide the doctor's information like the Doctor's name and his/her website link. So thar can easily find their doctor with don't face with any type of problem, and start their treatment. This will prepare with the help of Chatbot so that one can even check their problem at any time. You have to just reply with the clicking of button Yes or No.

### 4.1 Scope of the Work

This project consists number of patients history, their health records and previous prescriptions.

This work help visitor to get health related advice and suggests experts of their fields.

Provide maximum accuracy in result of health issues based on Symptom's Based Query.

Chatbots have an ability to engage customers. They can also foster a relationship between customer and brands, and deliver a more personalized experience. Bots impart information about new product launches and timely updates to the customers.

### 4.2 Project Modules

*1.**Problem Recognition**: The Problem Recognition Module is responsible for understanding the visitor's problem throught basic Yes/No queries.*

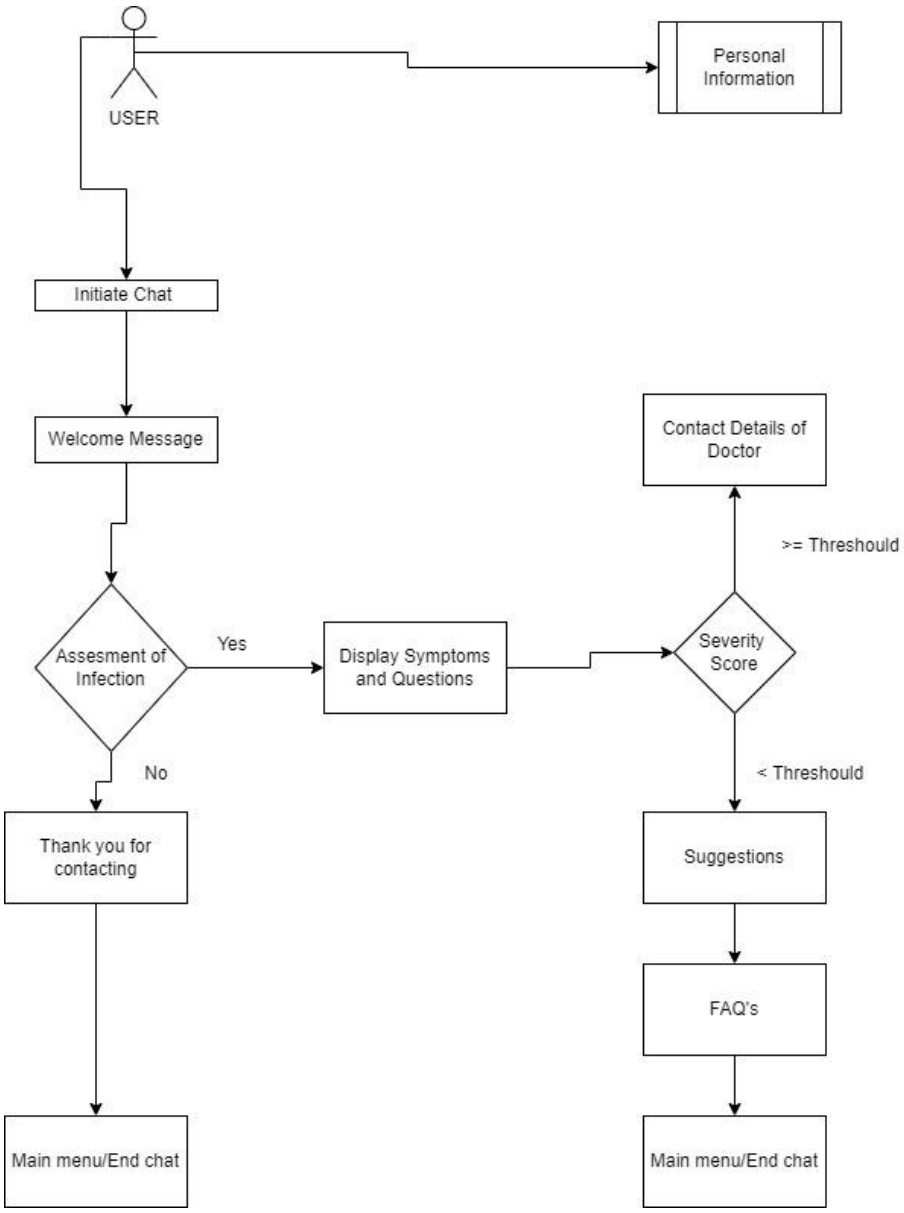
*2.**Evaluation and synthesis**: This module evaluate the problem into different segments and synthesis the collect data and feed into the module.*

*3.**Modeling**: This module is responsible for processing evaluated data and determine the issue occur in the data entry.*

*4.**Result:** After the model process the problem, this lead to the result of the problem recognized by the HealthCare Chatbot.*

*This module may represent the suggestion of the doctor or suggests the Doctors of the field.*

# 5 Implementation Methodology



# Technologies to be used

### 6.1 Software Platform

a) **Front-end:** Tkinter, Jupyter Notebook, Python 3
b) **Back-end:** My Sql,

### 6.2 Hardware Platform

4 GB RAM, 20 GB Hard Disk, OS windows 7plus .

# 7 Advantages of this Project

**24/7 Availability** – Customers needn't wait for the next available operator when chatbots are part of the communication strategy on a round-the-clock basis.

**Instant Response** – Chatbots can handle the queries of thousands of customers instantly as well as simultaneously and improve the average response time.

**Consistency in Answers** – The use of chatbots can help businesses maintain a great level of consistency in answers and improve customer experience with the brand.

**Omni-channel** – AI-powered bots come with omni-channel messaging support features which help customers communicate with businesses through various channels such as websites, Facebook, etc.

**Personalization** – Bots can ensure a touch of personalization by engaging customers with one on-one conversations, maintaining a natural-sounding tone, and by being good at interactive communication.

**A reduction-** in human error and more accurate diagnosis.

**Well-recorded** -and reliable monitoring of a patient's progress.

**Well-recorded** -and reliable monitoring of a patient's progress.

# 6 Future Scope and further enhancement of the Project

A chatbot is a computer system, which can interact with users by using natural language. Normally, it is designed to serve in a certain domain such as online shopping, online frequently asked questions (FAQ) and also assistant system. Users can easily use it without background knowledge or experiences. Moreover, chatbot can serve many people at the same time with the same topic and without getting bored. Consequently, this may be the suitable capability to be adopted in public service such as the medical service. Hence, the objective of this work is to increase the service capability and decrease the operation cost of medical consultant service by using the chatbot.

# 7 Team Details

| Project Name & ID | Course Name | Student ID | Student Name | Role | Signature |
|---|---|---|---|---|---|
| Data Science | ECS 799 | TCA 1809060 | Raushan Raj | Python Developer | |
| Data Science | ECS 799 | TCA 1809060 | Nameera Meraj | Tester | |
| Data Science | ECS 799 | TCA 1809067 | Arjun Sharma | Ui Developer | |
| | | | | | |

# 8 Conclusion

It determined that the modern chatbots perform at a very high standard to provide a reliable response to users compared to the traditional chatbots. Unlike existing chatbots which focused on various domains of healthcare. This is the best solution for people who are busy with their job schedules. They do not need to wait in the queue for hours to get an appointment with a doctor every time instead they can chat with the bot

# 9 References

1. www.w3schools.com
2. www.stackoverflow.com
3. www.it-ebooks.com
4. Jupyter Notebook [ Website ]

5. Python Language [ Website ]