

## Chatbot

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### ABSTRACT

The days of simply engaging with a service through a keyboard are over. Users interact with systems more and more by using voice assistants and chatbots. A chatbot is a computer program that can chat with human's using Artificial Intelligence in messaging platforms. Every time when the chatbot gets input from the user, it saves the input and response, which helps chatbot with little initial knowledge to evolve using gathered responses. With increased responses, precision of the chatbot also gets increase. The ultimate goal of this project is to add a chatbot feature and API. This project will inquire into the advancement of Artificial Intelligence and Machine Learning technology that are being used to improve many services. Most importantly it will look at development of chatbots as a channel for information distribution. The program will select the closest matching response from the matching statement that matches the input utilizing WordNet, it then chooses the response from the known selection of statements for that response. This project aims to implement online chatbot system to assist users who access college website by using tools that expose Artificial Intelligence methods such as Natural Language Processing in allowing users to communicate with college chatbot using natural language input and to train chatbot using appropriate Machine Learning methods in order to be able to generate a response. There are various applications that are incorporating to a human appearance and intends to simulate human dialog, yet in most cases, knowledge of chatbot is stored in a database created by a human expert.

### I. INTRODUCTION

Chatbots also known as conversational agents, are designed with the help of AI (Artificial Intelligence) software. They simulate a conversation (or a chat) with users in a natural language via messaging applications, websites, mobile applications or a phone.

Chatbots represents a potential shift in the interaction of people with data and services online. With the increase rise of interest in chatbot design and development, we lack the knowledge to know about why humans use chatbots. They are simulations which can understand human language, can process it and response to human while performing specific tasks, for example, a chatbot can be employed as a helpdesk executive. Chatbots are not considered as a recent development. The first chatbot was created by Joseph Wiesenbaum in 1966 named as Eliza. It first started when Alan Turing published an article named "Computer Machinery and Intelligence" and this

raised an intriguing question, "Can machine think?" Since then we have seen multiple chatbots that are outstanding to their predecessors to become more naturally conversant and technologically advanced. These advancements made an era where conversations with chatbots have become more normal and natural as with another human.

### II. Literature Survey:

A Chatbot is a program that re-enacts a conversation between a user and a machine. The machine has been set the knowledge to identify the queries asked by the student and other users and makes the decision itself to respond to the queries. In turn, the user needs to ask the queries that are answered by the chatbot. These bots will be found on a book-based UI that permits the client to type orders and get messages just as content to discourse response. It can be more certain when it is coordinated with well-known web services. The school request

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chatbots will be falsify utilizing counterfeit calculations that can undoubtedly comprehend and investigate client messages. The client can put forward the inquiries that are school-related activities through the chatbot without genuinely accessible to the school for inquiry. By using Artificial Intelligence, the queries are answered by the system that are being asked by various users. The user just simply needs to enlist and login to the system. Natural language handling (NLP) is use for tokenizing, stemming, and separating the substance of the objection given by the client. [1]

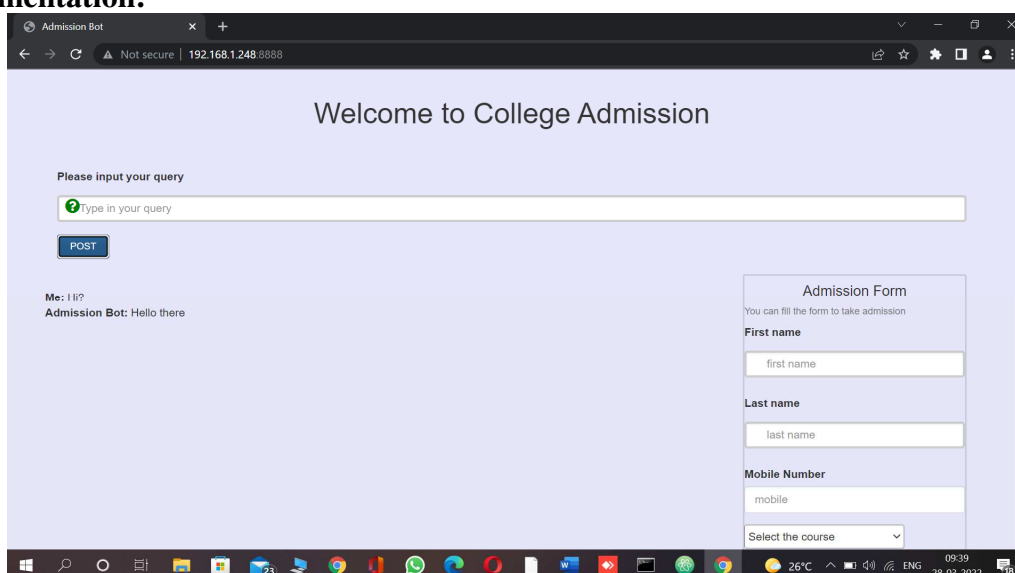
A chatbot is a software application that is use to conduct an online chat conversation throughtext or text-to-speech, instead of providing direct contact with a live human agent. It is design to convincingly simulate the way a human would behave as a conversational partner. Bots can be created by using language like Artificial Intelligence Mark-up Language(AIML), a language based on XML that allows developer to write rules for the bot to follow. [2] Another drawback is writing rules for different scenarios is quite time consuming and it is impossible to write rules for every scenario. So these bots can handle simple queries but fails to manage complex queries. The chatbot system is been proposed and are designed for using the chat fuel platform. The chatbot has been designed to allow the students in communicating with the staff from college and addressed their queries through the conversational text. The responses can be provided to the user in text format, with pictures and many more features provided by the chat fuel. The setup AI feature makes the bot smart and answers the queries of the user. The purpose of developing this project is based on an intellectual chatbot system which deals with the academic activities like admission enquiry, fees structure, scholarship details, time-table of every

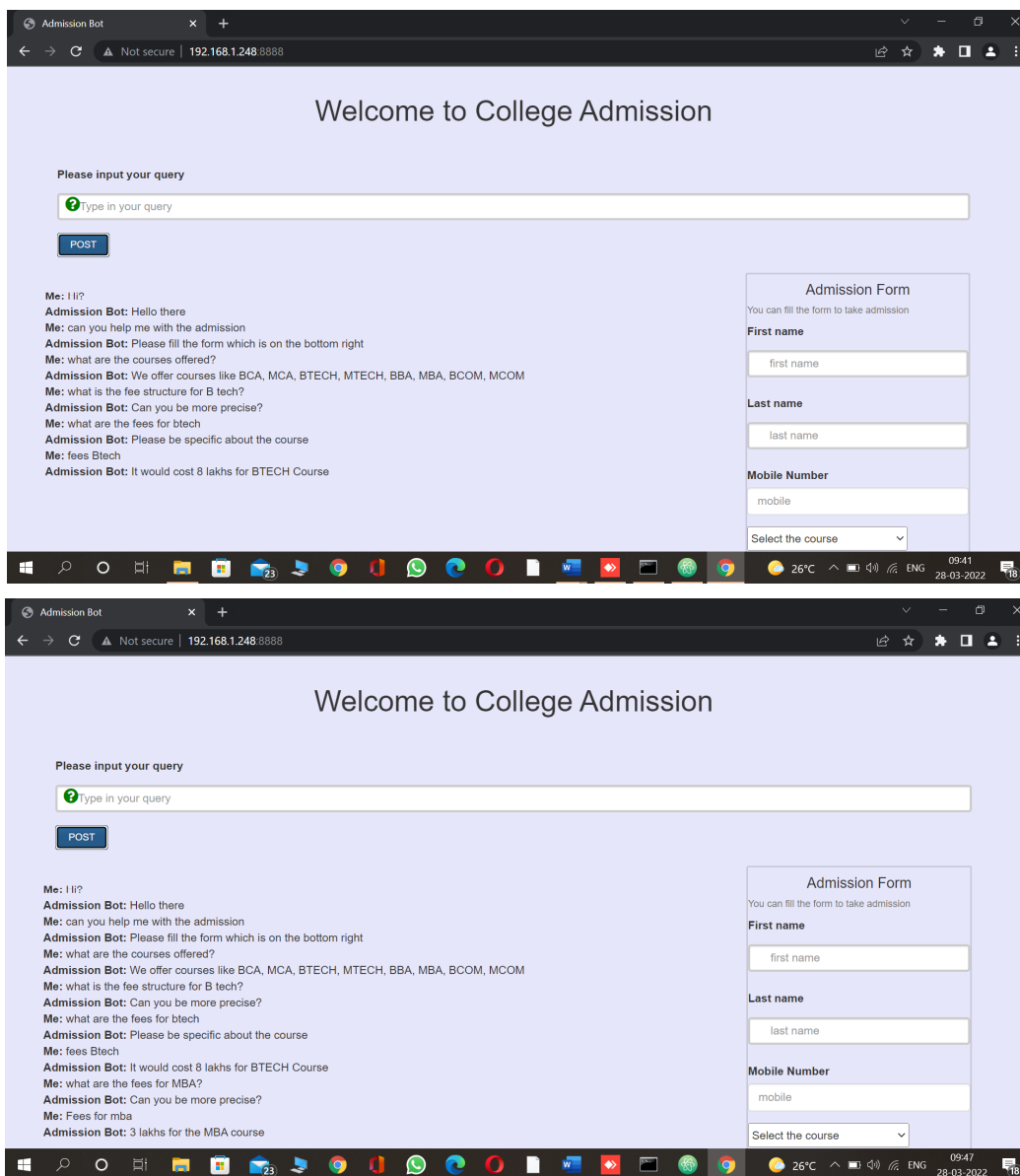
department, and details of the documents required to attach. With this chatbot system it will be accessible for the students to directly clear their queries in lesser time.

Speech is considered as one of the most powerful forms of communication between humans. Hence, it is the researcher's goal to improve the speech interaction between the human and the computer in order to providehuman-human speech interaction. With modern network computing devices the speech interaction has receive increasing interest in the past few years with contributions from Google, Android and IOS. Since they are more natural than graphic-based interfaces, hence spoken dialogue systems are beginning to form the primary interaction method with a machine. Therefore, speech interaction will play a significant role in improving machines in the near future. [3]

Research work has focussed on improving the recollection rates of the human voice and the technology is now approaching the ability for speech based human computer interaction. Speech Interaction is divided into more than one including: speech recognition, speech parsing, NLP (Natural Language Processing), keyword identification, Chabot design/personality, artificial intelligence. Chatbot is a computer program that has the ability to converse with human using Natural Language Speech. In this paper, Chatbot design techniques between the human and the computer is presented. The different techniques used for Chatbots in the words are then process to extract the meaning and to bring about a response as speech or action as required. Different grammar rules are used to classify the tagged words in the text into groups or phrases relating to their neighbours and positions. This type of grouping is categorised as chunking into phrases, such as noun phrases and verb phrases.

### III. Implementation:





#### IV. Experimental Results:

In this paper, the proposed system was successfully tested to achieve its effectiveness and achievability. Chatbot reduces the paperwork, manpower and time for any individual. It has developed an application where interaction with users by means of reducing the time for visiting the college to enquire about the details or any information regarding admissions, college activities or any other administration in an academic institution. This allows the user to chat with the chatbot by format. The

user or the student and the Administrator can interact through a chatbot. The questions which are not answered by the chatbot will be added and updated by the Admin.

#### V. Conclusion:

The main objectives of the project was to develop an algorithm that will be able to identify the answers associated with user submitted queries. A database is developed to store all related data and to develop an internet interface. The web interface had developed one part and that is for the administrator. A

background research was conducted which included a summary of the conversation procedure and any relevant chat bots available. A database system was then design to store information regarding questions, answers, keywords, logs and feedback message.

#### VI. Future Work:

With machines and electronic devices becoming our number one priority in our day to day lives, hence more studies on this subject should be encouraged as it makes the students or the users easy to access and their queries answerable in a faster period.

#### VII. Reference:

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