

AI BASED CHATBOT FOR THE ANALYSIS OF ADMISSION ELIGIBILITY

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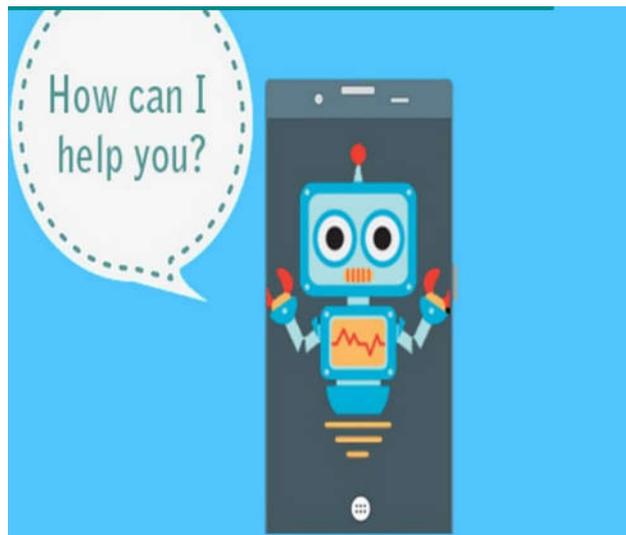
Abstract— *In today's world, most of the website uses Chatbot system for solving the queries regarding the usage of service. A Chatbot aims to make a conversation between both human and machine. The purpose of this research is to portray a method of determining the eligibility of student for the college admissions after the completion of 12 th standard by using a technical way. It can be used by colleges as well as student and their parents. It enables the user to see whether he or she is eligible for the particular college admission for the particular stream or not. Furthermore, the user can get all the detailed information about the college, their events placements faculties, syllabus, culture etc which can help the user in taking the right decision, and know if he or she can be admitted to the college. Analysis of eligibility detection are just chances based on the yearly cutoff and depending upon all the factors such as category, PCM marks and MHTCET marks to detect the eligibility.*

Keywords: Chatbots, Natural Language Processing, GUI

I. INTRODUCTION

A chatbot is a service that people can interact via interface, usually a webpage dialog box or an application. We can ask questions using options which can be considered as Click based chatbot or rule based chatbot. Also we can ask questions by typing in the same way you would ask a person. And chatbot also responds in the same way a human responses in a conversation. Chatbots are basically

computer programs that interact with users using natural languages. Chatbot technology started in the 1960's, to check if chatbot systems could fool users that they were real humans. However, chatbot systems are not only limited to mimic human conversation, and entertain users. In this paper, we will also



investigate other applications where chatbots could be useful such as education, information retrieval, business, and e-commerce.

II. LITERATURE REVIEW

[1]Question Answering (QA) systems can be identified as information accessing systems which try to answer to natural language queries by providing answers instead of providing the simple list of document links. QA system selects

the most appropriate answers by using linguistic features available in natural language techniques. They differ mainly from the knowledge sources; the broadness of Dialog Systems (NLDS) is an appropriate and easy way to access information. QA system based on Semantic enhancement as well as the implementation of a domain-oriented based on a pattern-matching chat-bots technology developed within an industrial project (FRASI). The proposed approach simplifies the chat-bots realization which uses two solutions. First one is the ontology, which is exploited in a twofold manner: to construct answers very actively as a result of an deduction process about the domain, and to automatically populate, off-line, the chat-bots KB with sentences that can be derived from the ontology, describing properties and relations between concepts involved in the dialogue. Second is to pre-process of sentences given by the user so that it can be reduced to a simpler structure that can be directed to existing queries of the chat-bots. The aim is to provide useful information regarding products of interest supporting consumers to get what they want exactly. The choice was to implement a QA system using a pattern-matching chat-bots technology.

[2]This paper describes an approach to the idea of identifying the most important facts in texts describing the life of a historical figure for building a conversational agent that could be used in middle-school CSCL scenarios. This paper presents a method for building a chat-bot that can simulate a historical figure. The can receive as "input" a plain text or a web page about the historical figure and has as "output" a trained conversational agent which is able to answer all kind of questions about the life experience of that specific person. the purpose is to provide a generic solution to this problem, so the goal is not to simulate the life and behaviour.

[3]Chat-bots are mainly to used to provide conversation between both human and machine. Admin feeds some knowledge to the machine so that machine can identify the sentences and taking a decision itself as a response to answer a question. The chat used is actually Indonesian conversational pattern and the database used in this project is MySQL. It can miss in defining a sentence and how to the response it while connecting chat application to the database. So knowledge representation and implementation of SQL in the pattern-matching operation are needed. A data that has been modelled based on the pattern of the conversation would be tested by the help of a series of scenarios. The conversation with the Chatbots would be crosschecked back to the basic pattern. It is done so that it can add some knowledge to the database as it has not been modeled before. If in case the input sentences in the database did not match then it will be remodelled.

In the year 2007 BAYAN ABU SHAWAR & ERIC ATWELL, "Chatbots :Are they Really Useful?", This project defined about the need of conversational agents that had become acute with the widespread use of personal machine with the wish to communicate and the desire of their makers to provide natural language interfaces (Wilks,1999)

Alice's knowledge about English conversation patterns

is stored in AIML files. AIML, or Artificial Intelligence Mark-up Language, is derived from Extensible Mark-up Language (XML). Which was developed by Wallace and the Alicebot free software community from 1995 onwards.

AIML has three categories viz. atomic categories, default categories, and recursive categories.

a. Atomic categories: are those with patterns that does not contain wildcards symbols.

b. Default categories: are those with patterns containing wildcard symbols * or _.

c. Recursive categories: are those with templates having <sr> and <sr> tags, which refers to recursive reduction rules. Recursive categories have many applications like symbolic reduction which reduces complex grammatical forms to simpler ones.

Here we developed the strategy that why bots are being used worldwide and how they are simplifying the lives of humans.

Further ELLIS PRATT, "Artificial Intelligence and Chatbot in Technical Communication -A primer" told us about the types of chatbot.

1. One that operates based on a set of rules. It can only respond to very specific commands. If we, as the user don't use the right command or words, the chatbot doesn't know what you mean.

2. The other type uses machine learning and artificial intelligence to provide the best response and experience. We'll call these AI-powered chatbots.

We also studied on the future applications of chatbot which could replace apps.

For users, intelligent systems like Siri and Alexa have replaced many software applications (apps). For example, when we command them to book meetings in our calendars and buy train tickets for us.

III. DESIGN AND IMPLEMENTATION

A. Abbreviations and Symbols

This proposed paper includes various abbreviations and symbols used, which are as follows.

1. AI: Artificial Intelligence
2. NLP: Natural Language Processing
3. XML: Extensible Markup Language
4. AIML: Artificial Intelligence Markup Language

B. Design and Working

Before moving to design of the bot, first we must focus on some of the points which helps us in designing simultaneously.

1. Identify the Opportunities For an AI-Based Chatbot

As companies consider how best to apply new Bo technologies to their business, they need a way to think about which types of work can be automated or augmented by AI solutions. AI is based on two criteria:

- Work Complexity
- Data complexity.

2. Understanding the Goals of Users

Our chatbot understands the goal of parents to know about the college and the admission criteria.

3. Designing a Chatbot Conversation

Chatbot interactions can be segmented into structured and unstructured interactions. As the name suggests, the structured type is much about the logical flow of information, including menus, choices, and forms into account. The unstructured conversation flow includes freestyle plain text.

4. Chatbot Platforms

1. HTML

HTML is the simple standard markup language for creating Web pages. Which stands for Hyper Text Markup Language. It describes the structure of a Web page and consists of a series of elements. HTML elements tell the browser the way to display the content. The elements are represented by tags HTML tags label describes of content like "heading", "paragraph", "input", etc. Browsers do not display the HTML tags, they use these to render the content of the page.

2. CSS

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language like HTML, CSS is a cornerstone technology of the world wide web, alongside HTML and JavaScript.

3. jQuery

jQuery is a light, fast and feature-rich JavaScript library, which makes things like HTML document traversal and manipulation. Interactive features like event handling, animation, and Ajax much simpler with an easy-to-use API that works across a multitude of browsers. jQuery API to create a sensible, smart, interactive live chat bot from a traditional html form where we can define our own questions by using form field using conv-* attributes. The plugin just requires the latest jQuery library is loaded properly in the document.

4. GUI

The graphical user interface is a user interface that allows users to interact with applications and electronic devices through graphical icons and audio indicator such as primary notation, instead of text-based user interfaces, typed command labels or text navigation.

5. JAVA

Java is a general purpose programming language that is class-based, object-oriented, and designed to have as few implementation dependencies as possible. It is intended to let application developers write once, run anywhere (WORA), meaning that compiled java code can run on all platforms that support java without the need for recompilation.

6. NLP

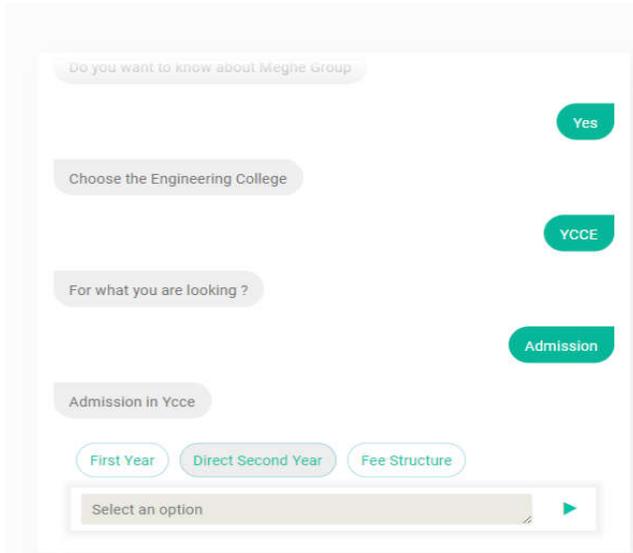
Natural language processing can be defined as a sub-domain of linguistics, computing, information engineering, and artificial intelligence domains that deals with the interactions between computers and human languages (natural languages), in particular how to program computers to process and analyze large amounts of natural language data and find the patterns and further learn themselves.

C. Implementation of the proposed project

The thing which connects the working mechanism of our chatbot is the code. The code as mentioned earlier is written by using various libraries. The proposed project is easy to operate by the user. Depending on the cutoff marks for the particular year, the user can check the eligibility criteria and chances of getting admission in the desired college for the interested branch. Further the user can reach out for the particular information related to college. When an input is given the bot detects in which branch user is interested in. If the user wished to search about events of the college, user will be redirected to the main event site of that college through the bot. The HTML, CSS, jQuery plays an important role in the front end coding part which displays the GUI of our chatbot. It consist of the URLs which directly redirects the user for the particular thing the user is desired to know. In addition it calculates the eligibility of student or user on the basis of some input factors such as PCM marks ,MHTCET marks, category and stream interested in. If the user marks is above all the rules mentioned in set then the chatbot shows the chances of eligibility in that same college for the particular branch.

IV. RESULTS AND DISCUSSION

The system mainly focused on the basic structure of Chatbot that is how the chatbot is going to responds to the questions asked by the users. This is all performed through some NLPs which we have used in our chatbot. We have made the GUI through which the user can interact with the chatbot. The GUI is mainly developed by using some front end coding which is done with the help of jQuery, Html, CSS. The back end coding has been playing a very



crucial role in our chatbot. The back end coding has been done in JAVA language we have used many basic concepts of JAVA core. The coding shows the rule based chatbot through which we could interact with our chatbot by using the options, that means the chatbot will particularly give the user an option to interact with, This is one of the technique which will help to interact with users called as rule based chatbot. The Chatbot will be very useful for the students which are willing to know about the admissions process of the particular meghe colleges. When an input is given the bot detects the input and responds correspondingly. If the user wished to search about events of the college, user will be redirected to the main event site of that college through the bot.

V. CONCLUSION

Through this conventional research, we draw a conclusion that the new chatbot system will help the college by overcoming some major flaws. Using the above project, we can help the college website by adding a Chatbot to help the user to know about the college, their facility to take admission and users who visits the college website. This research will overcome the pitfalls that the students come across during the peak times of admissions. We live in a corporate world so it is not surprising to see that more people are getting inclined to use Chatbot and their facilities. Of course, people have to consider the human interaction that it provides in chat service, but this conventional service from the maker's side got some limitations. There is not an issue with Chatbot because of the wide range of services it provides and most importantly, it provides the 24/7 availability. Chatbot are way different from humans. It will work like to generate a realistic kind of conversation with people who come to the website, with the major aim of assisting them to get what they want, in a quicker and more accurate and easy manner.

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