



ARTIFICIAL CONVERSATIONAL ENTITY

(AI Chatbot)

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Abstract: Chatbot is now-a-day widely popular and catching speed as a computer communication application. Some programs responds intelligently like human. This type of software is known as Chatbot. This paper is to create an automated sourcing desk in such a way that the system will make the recruitment tasks and business marketing and workflows easier so that it can improve recruiter's productivity and improve the overall talent of an organization and thereby increasing competitive advantage in hiring. Automation is to create and its application of the technology in order to control and monitor the delivery and production of various goods and services.

Index Terms - Chatbot; Communication; Pattern Matching; Request; Response

I. INTRODUCTION

In today's world computers play an important role in our society? It gives us information; they entertain and help us in many manners. A chatbot is a program designed to imitate a smart communication on a text. It recognizes the user input as well as by using pattern matching, Its access information to provide a predefined acknowledgment. If the user is providing the bot For Example, a sentence like "What is your name?" The chatbot replies as "You can call me Chatbot." based on the sentence given by the user or the chatbot is most likely to reply something like "My name is Chatbot."

Using pattern comparing, a Chatbot is implemented, in which the sentence order is recognized and a saved response pattern is adjusted to the sentence's exclusive variables. Chatbot reflects a fairly new technology. Various fields can be seen in the application of a Chatbot. A recruitment chatbot uses AI technology such as natural language processing to understand a person's messages and know how to respond.

II. DESIGN OF CHATBOT

- A Chatbot refers to a chatting robot. It is a communication simulating computer program.
- It is all about the conversation with the user. The conversation with a Chatbot is very simple.
- It answers to the questions asked by the user.
- how does the Chatbot speak to the user? ,During designing a Chatbot And how will be the conversation with the user .

Diagram as follows used in the design of a Chatbot is represented as:

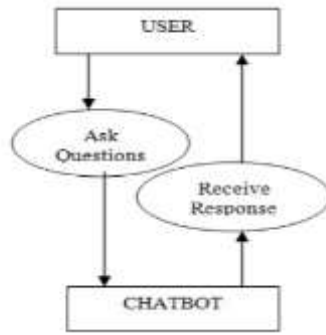


Fig 1. Design of Chatbot

When created a Chatbot the subsequent details are kept in mind :

- **Selection of OS :** Windows is employed for this project because we found it easy to use.
- **Creating a talk:** Might be easy to know and therefore the chat is made using a pattern that's known to the user .Chat panel show up to make conversation.
- **Pattern Matching:** Utilized in the planning of a Chatbot it's a way of AI .The input is matched with the corresponding response is returned and inputs saved within the database.
- **Simple:** The planning of a Chatbot is extremely simple. It just answers to the questions asked by the user, if the question is found within the database.
- **Conversational and Entertaining:** The Chatbot responses are documented to the user. The conversation follows a Basic English language and interacts in a simple to read manner. The conversation between the Bot and therefore the user is entertaining. it's like lecture other person.
- **All-purpose chatbot platforms**
 - All-purpose chatbot platforms give their users full freedom to combine and integrate their chatbot with their choice of resources.
 - Dialogflow, IBM Watson Conversation and Microsoft Bot Framework are a few examples of services in this category.
 - Other sources refer to this group of platforms as conversational or conversational assistant platforms .
 - These platforms usually offer very rich including APIs, pre-built clients for multiple programming languages and give their users real freedom in implementation.
 - Multiple applications and services can be integrated and deliver a wide set of functionalities to a chatbot.

Dialogflow

- Top class NLP intent and entity recognition including supervised training and manual results correction.
- Dialogflow is a platform focused on core NLP. Intents and conversations can be defined (using stateful contexts) but the platform does not feature any rich graphical tool. Yet it is simple enough that basic transactional chatbots can be created with minimal effort. Transactional chatbots are characterized as bots limited to a number of optimized use cases that can eliminate the need to talk to an expert or use complex UI.
- A webhook interaction is available via a direct call to an external system or using Google Cloud Functions. Dialogflow supports the following channels for message delivery: Slack, Twilio, Viber, Skype, Telegram, Facebook Messenger, Amazon Alexa, Cortana, and, of course, Google Assistant. Dialogflow can be fully controlled via a rich REST client.

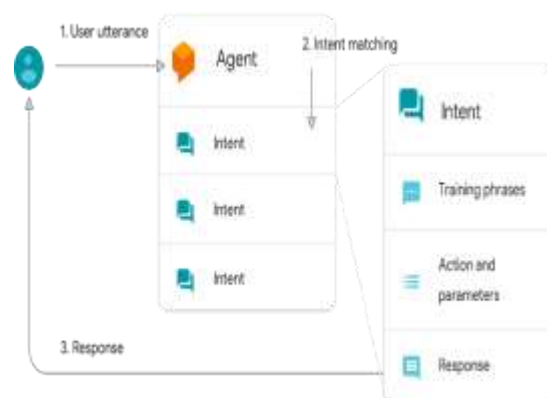


Fig 2. Agent Formation

The matched intent has a response back to the user. This response can be a simple text or spoken acknowledgment or a webhook response that includes information obtained from another system. Dialogflow sends a webhook request with the location and date parameters to a third-party weather service. This weather service returns a webhook response in JSON format. The agent's custom fulfillment parses the JSON data and delivers a response to the user with the relevant information.

III. METHODOLOGY

First step of the sourcing is gathering requirements. In this the requirements are gathered by approved resignations, vacancies generated in the organization, requirement of more manpower, etc. After the requirements are gathered next step is sourcing of candidates. This can be done internally through existing employees or externally through various platforms such as naukri.com and others. It can also be done from templates, advertisements, social media, etc. Every CV sourced cannot be referred directly, so there are some hiring guidelines decide by the Head of the team. Undergoing those hiring guidelines those resumes are shortlisted.

Further shortlisted candidates are communicated through mail or a message which consists of some data about the job or it has a link to the video JD, along with the session code to the assessment. So the no of candidates undergone the test and the no of candidates who have cleared it are being monitored remotely.

We are testing candidates and supplying their resumes to the recruiter and in-hand he/she supplies them to the manager. Change management comes in role when the manager is not happy with the recruitment, so in order to satisfy him we ask every selected candidate to record a video interviewed or video resume, which we send to the manager so that he could know about the candidate more efficiently.

Further we also maintain the database about the feedback from the manager about quality of the resumes provided by us and to overcome any negative feedback is our objective. This database is maintained on a dashboard where we can access to everything easily.

There are different ways a human being can ask the same question. So your bot should be smart enough to understand the question and provide the appropriate response to the user. With an accurate response the interaction has to be precise and it should be able to solve any query. To make it a success, there needs to be a narrative and flow in the conversation. You have to start by building for this. This is the complete methodology of chatbot i.e. how it is designed how it is used and all. It consist of intent building, adding training phrases, entity creation, adding responses, creating follow up intent which are dynamic types of questions. The whole process is well explained in the further chapters.

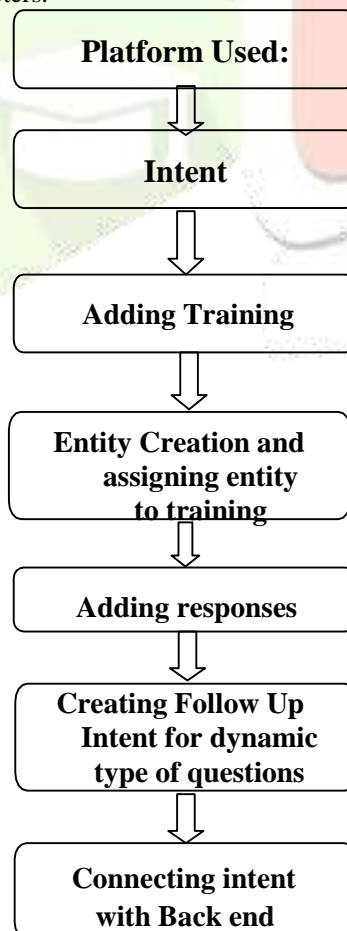


Fig 3. Complete Methodology of Chatbot

IV. COMPARISON

This Chatbot is very simple and user friendly. It is not very complicated like other Chatbots. The working of the Chatbot is simple and can be easily understood by any person. In other Chatbots, the working is very complicated. Many classes are used which is difficult to understand. In this program, just one class is employed to form it simple and acquire the expected output. This Chatbot uses simple pattern matching to represent the output and input whereas other Chatbots uses keyword patterns, input rules and output rules to generate a response. If the input is not found in the database, a default response is generated.

The input and output can be customized according to the user. On the basis of developer or the user, the required requests and responses can be stored in the database. Since own database can be created and it allows the user to understand how the response is generated. This Chatbot can be used for the entertainment purpose. Whenever an individual is bored, he can chat with the bot for entertainment. It can also be used to provide information by modifying the program as needed by the user.

V. RESULT

Chatbots asks a variety of questions about a candidate’s skills, qualifications and experience. This helps to qualify and rank an entire group of candidates against the standards from the employer. Recruitment chatbots are trends which turn the recruitment face. Hence These chatbots come with a series of opportunities and possibilities, having the potential to disrupt the recruitment space. However, along with incredible benefits, these chatbots opens up new doors of challenges.

Output:

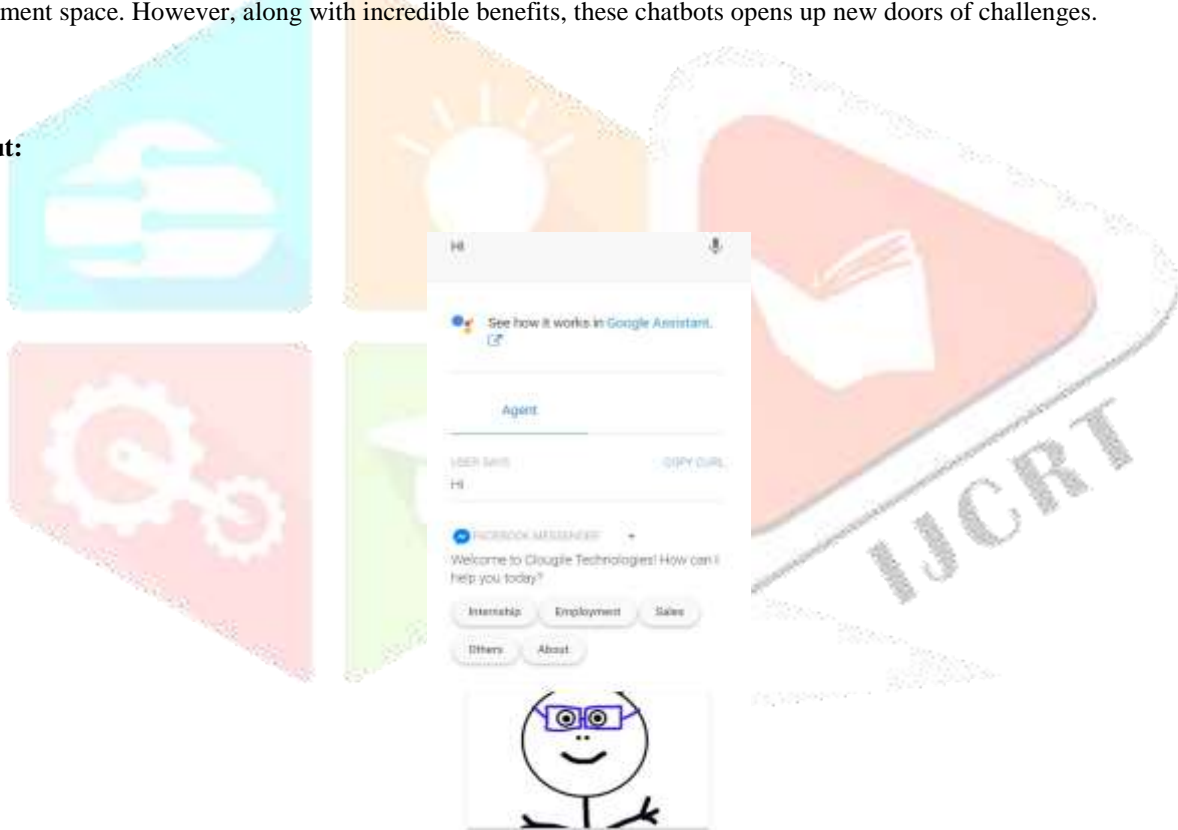


Fig. 4. (a) Test bot (using Facebook messenger)



Fig. 4. (b) Screening Test Bot

VI. FUTURE SCOPE

Chatbots are also referred to as virtual assistants. It is a rudimentary form of artificial intelligence software that can mimic human conversation. The Chatbots can be analyzed and improved. It can be used in various areas such as education, business, online chatting etc. It can be used in the field of education as a learning tool. The information necessary for education are often stored within the data base and may be retrieved any time by querying the bot. In business field, it can be used to provide business solutions in an efficient way. When the solutions are effective, the business are often improved and the growth of the organization will be increased. This Chatbot can be used in online chatting for entertaining purpose. People can chat with these bots online when they are bored for the aim of entertainment. These bots can also be used to learn different kinds of language.

The language that has got to be learnt are often stored within the database and can be learnt by asking questions to the bot. They can also be used in the sector of medical to unravel health related problems. Chatbots are going to explode and can be really dominating in future. Chatbots can provide a replacement and versatile way for users. They are giving AI something better to do. Chatbots results in with each new development smart conversation and is advancing at an unprecedented rate. Chatbots stores contextual data which can be used in the detection of geo location or a state (which data is required that step when communicating with a bot?). This could also be a telephone number or other private data, and nobody knows whether before it gets saved to a database the data is encrypted. Since Chatbot provides and predicts accurate response to a posed question, it is hard to imagine the future without a Chatbot.

VII. CONCLUSION

A chatbot is one among the straightforward ways to move data from a computer without having to think for correct keywords to seem up during a search or browse several sites to gather information; users can easily type in a natural query word and information retrieval. Data, in this paper about the architecture, chatbot implementation has been presented. From the survey above, it is often said that the improvement and development of chatbot design grow at an unpredictable rate due to variety of methods and approaches used to design a chatbot.

Chatbot is a great tool for prompt user interaction. We support us by providing content, saving time and answering the hard-to-find questions. The Chatbot needs to be conversational and easy. Since there are many designs and methods for building a chatbot, commercial concerns may be at odds with that. Researchers must work together and decide on a common strategy for designing a Chatbot. In this project, we looked into how Chatbots are developed and the applications of Chatbots in various fields. In addition comparison as been made with other Chatbots. General purpose Chatbot must be user friendly, simple, quick, must be easily understood and the knowledge base must be compact. Although some of the commercial products have recently emerged, improvements must be made to seek out a standard approach for designing a Chatbot.

VIII. REFERENCES

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