JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

Smart Chatbot

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***Abstract*— Instead of offering direct touch with a real human agent, a Chat-bot is a software programme that conducts an online chat discussion using text or text-to-speech. Designed to closely resemble how a human would interact with a conversational partner. We introduced a chatbot in the suggested system that delivers a dynamic answer to online customer enquiries. The proposed system is based on a chatbot driven by artificial intelligence. The web-based platform has a large intelligence database that may be used to replicate human problem-solving. This suggested chatbot recognises the user context that prompts a certain response intent. Because it is a dynamic response, the user will receive the desired response. To train the suggested system uses machine learning methods. Our research found that the strength of Chat-bot is that it can be used in a variety of sectors in our daily lives, based on 17 IEEE publications and 13 S tandard papers. Nowaday s, chatbots have grown in strength as Artificial Intelligence assists the human touch in every discussion, allowi ng chatbots to comprehend the learner's question and provide the appropriate response. The goal of project is to show how chatbots may assist an organisation reduce its reliance on people while also reducing the requirement for several systems for different operations.**

Keywords—Chatbot, Artificial Intelligence, Machinelearning, Web-based.

I. INTRODUCTION

Artificial intelligence (A.I.) has becoming increasingly popular for mimicking bot -human dialogues, particularly on mobile platforms. Such chatbots functioning varies from practical to entertaining, but their worth is frequently unclear. The purpose and need for these chatbots is frequently unclear. Although inquisitive and prying may lead to first engagement with chatbot, we should develop a generally accepted role with a clear goal to bring additional value to continued encounters. What a chatbot is and how to utilise one successfully are both novel concepts that many people are having trouble grasping. Chatbot interactions can take the form of text or voice exchanges, and their value varies depending on the situation. Accord the whole information of the user, the outcome the user wants , and environmental elements is required to determine the optimal input modality. Rather than establishing a goal from the perspective of the chatbot designer, we employ a user-centered approach to learn how people perceive and interact with chatbots in their daily lives.

We may begin to analyse chatbot performance and purpose by evaluating how chatbot encounters live up to expectations and how chatbot services compare to alternatives. We should expect increasing accessibility to chatbots now that they are availab le on mobile devices. Number of mobile chatbot applicatios has constantly increased, as well as the number of chatbots.

II. LITERATURE SURVEY

Chat bots, also called as human computer interaction, are a new technique for people to connect with computers. To get a query answered by a software programme in the past, you had to use a browser or fill the given form. A chat bot grants a consumer to seek inquiries in the as they do to a live person. Voice chat bots, such as Alexa and Siri, are now the most famous chat bots. Chatbots, on the other hand, are presently being widely used on computer chat platforms. Natural language processing ("NLP") is the technology at the heart of the chat bot's emergence. The accuracy and efficacy of natural language processing have substantially increased thanks to recent advancements in machine learning, creating chatbots a possible add-on. This advancement in Natural Language Processing has sparked in new research a lot, which will direct even more advancements in the future.

In the next years, chat bots will be more effective. The Chatbot has a better tomorrow since, in the last few years, we've seen it become increasingly popular as a website. It's also not too expen sive, so everyone with a database can use it . As the use of chatbots in association has increased to unprecedented heights. The majority of chat bot research focuses on various algorithms and a way to build an developed chatbot. The outcomes of professional persons, as well as any software or programmes, are heavily reliant on this study. Chatbots can communicate with a huge number of people at the same time.

They have the potential to become a useful data collecting tool in the upcoming time. The goal of the current research is to construct a conversation bot with various characteristics and knowledge about various natural language understanding methods.

PROBLEM STATEMENT

All businesses seek their customers to have knowledge about them so that they may acquire more works or vend more items. In the sophisticated world of digital marketing, the most basic approach to achieve the goal is by having strong bilateral website. However, in today's modern era, having a website isn't adequate because it doesn't include all of the facts and can't answer clien ts' questions. Perhaps question answer area is the solution, but it's time-consuming labour, and because "time is money," the customer willn't be patient. And humans cannot respond to everyone simultaneously, all day and all night, every single day. So we all seek a chatbot for that, not a regular one.

"Artificial intelligence chatbots are a type of technology that allows humans and robots to communicate using natural language. According to the present dialogue problem, a chatbot might respond differently to the same input supplied by the user." By ut ilising our "Intelligent ChatBot," you will be able to resolve all o f the aforementioned concerns, eliminating the need for humans to do manual tasks and ensuring that your consumers are satisfied. A chatbot is a type of traditional agent that can speak with humans using natural language. Despite the fact that various chatbot programme be found, there are yet certain challenges in developing user-driven systems since they require a large quantity of data to produce.

III. EXISTING SYSTEM

When it is possible, many firms utilise chatbots instead of humans. The majority of the time, such systems are based on how ELIZA or ALICE communicates.

1. ELIZA:

ELIZA was the first chatbot to be created. Joseph Weizenbaum used a keyword matching approach to create it. The aim was to read the user's input and look for certain keywords; if one was identified, the solution would be obtained. If a keyword was not found, ELIZA would attempt again based on the parameters.

To keep the discussion continuing, follow the guidelines to gather more information from the user. Consider the following scenario to see how this may work.

User: What is the best way for me to contact my mother?

The chatbot would instead recognise the phrase mother and make a relationship among mother and family, prompting a query.

ELIZA: Can you tell me a little bit as much about your parents?

The chatbot is unable to comprehend what it is saying. It only yields results if rules are followed, and in this case, a rule linking mother and family was followed. Then it had to come up with a response that would entice the user to ask another inquiry in the hopes of discovering a keyword. If a keyword isn't identified, ELIZA will usually respond with one of many typical responses. "Very intriguing, please continue" or "Can you think of an unique case?" are two instances.

A nice example of communicating to ELIZA is shown in the diagram below:

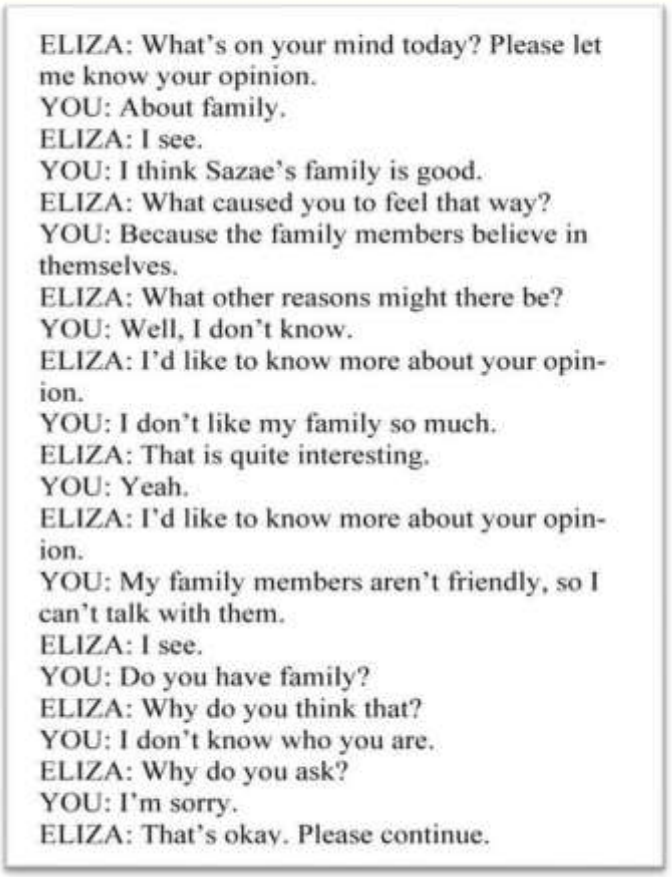

ELIZA: What's on your mind today? Please let me know your opinion.
YOU: About family.
ELIZA: I see.
YOU: I think Sazae's family is good.
ELIZA: What caused you to feel that way?
YOU: Because the family members believe in themselves.
ELIZA: What other reasons might there be?
YOU: Well, I don't know.
ELIZA: I'd like to know more about your opinion.
YOU: I don't like my family so much.
ELIZA: That is quite interesting.
YOU: Yeah.
ELIZA: I'd like to know more about your opinion.
YOU: My family members aren't friendly, so I can't talk with them.
ELIZA: I see.
YOU: Do you have family?
ELIZA: Why do you think that?
YOU: I don't know who you are.
ELIZA: Why do you ask?
YOU: I'm sorry.
ELIZA: That's okay. Please continue.

Fig: A sample conversation with ELIZA

2 A.L.I.C.E :

Richard Wallace introduced ALICE in 1995. It works by identifying patterns and storing the results in AIML files (Artificial Intelligence Mark-up Language). An AIML file is comparable to an XML file, which was created to contain chatbot pattern information. AIML categories are divided into three types: atom groups, basic classifications, an d recursion classifications, as detailed below.

Atomic classifications: Is just an AIML classification in which there is a perfect match.

<category>

<pattern>

What's your name?</pattern>

<template>myself Nick.

</template>

</category>

If the user asks "What is your name?" in the example above, the chatbot will respond, "My name is Nick." The following are the default categories: Is an AIML type in which any input is matched by using a wild character such as *.

<category>\s<pattern> What is the meaning of *

</pattern>

<template>

My name is if ALICE is unable to solve the problem using the first category, it will go on to the second. In this scenario, if a user types "What is a name," ALICE will search till it finds the wild char and, if a match is fou nd, it will return the response.

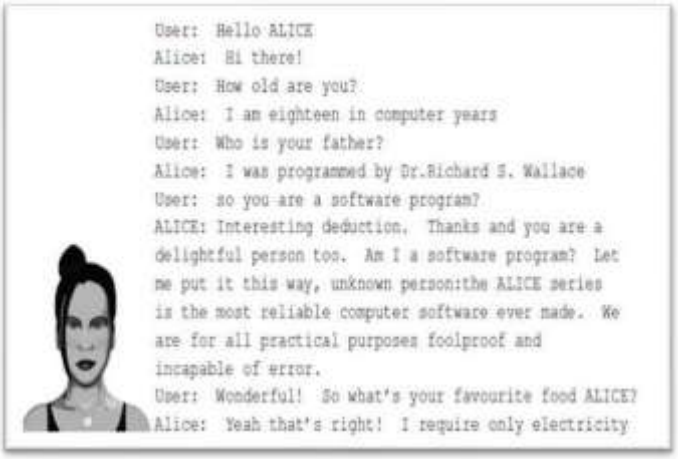
Recursive categories are AIML categories that require special tags to refer to a recursion to persuade.

<category>

<pattern>Do you know what the * is</pattern>
<template>It is my name
<srai>What is<star/></srai>
</template>
</category>

In this scenario, the user's input is reduced by using the wild character *. "Do you know what time it is?" becomes "What time is it?" if the user submits this.

A dialogue between a human and ALICE is depicted in the following diagram:



A sample conversation with ALICE (Shawar and Atwell, 2007)

IV. PROPOSED SYSTEM

Our project is built on a Chatbot driven by Artificial Intelligence. Python is a programming language that offers a user - friendly platform for connecting to the internet and offering legitimate and trustworthy online services. We've designed an example chatbot utilising twitch as an virtual platform that offers a chatbot stage to online clients. The web-based technology has a large intelligence database that may be used to emulate human problem-solving. If the user has a question or wants to inquiry about something, we may assist him. Our technique comprises a chatbot API that will be constructed using a Cascade Custom Layout that will cover all stylistic aspect s, as well as Javascript for the chatbot's back end functionality.

The following diagram shows thecomplete System Architecture:

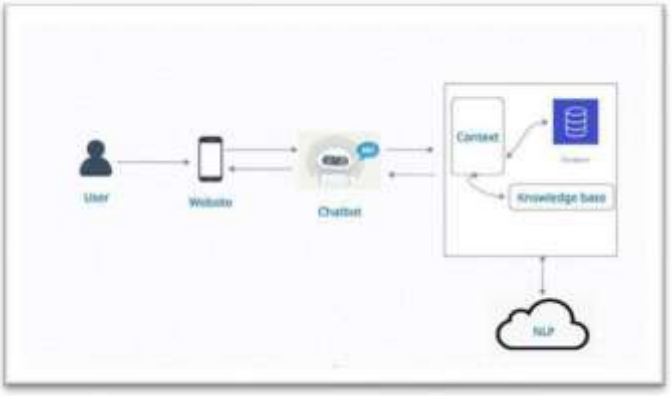


Fig. System Architecture Diagram

In a business model, the following graphic clearly demonstrates how a chat chatbot manages customer Q&A. The functionality of a conversation bot may be understood using the schematics below. The full Block Diagram is shown in the diagram below:

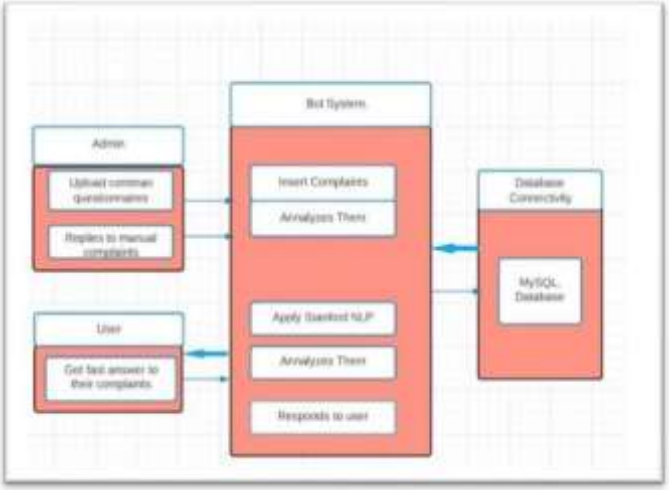


Fig. Block diagram for Chat bot

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