International Research Journal of Engineering and Technology (IRJET) e-ISSN: 2395-0056
Volume: 07 Issue: 05 | May 2020 www.irjet.net p-ISSN: 2395-0072

REVIEW OF AI CHATBOT

Prashanth S[1], Rakshith Gowda N[2], Sourabh Kakade[3], Gouramma[4], Vivek Sharma[5]

[1,2,3,4]*Student, Alvas Institute of Engineering and Technology, Mijar Moodabidri.*
[5]*Assistant Professor, Alvas Institute of Engineering and Technology, Mijar Moodabidri.*

Abstract - *A dialog-exchanging system generating a meaningful and empathetic conversation between human and a computer is called a chatbot which processes the natural language input that can be either a speech or a textual form and gives the response in the same language and expression as of the human. Various Natural Language Processing (NLP) techniques using the python library, Natural Language Tool Kit (NLTK) these inputs of speech from users can be processed and intelligent responses from such system engine can be gained to build up a human-like interaction. The chatbot is built with a limited dictionary but uses a great algorithm to imitate a real person. The chatbot can be used to find you an amusing partner and help you in bad times. If the users, ask the question to the chatbot it will give suggestion based on that question. The answers are appropriate to the user's queries, if the user find his answer to be invalid, it will give default message and will notify to admin. The algorithm used here has a intelligently built in logic and is designed to better chat with users.*

Keywords : Chatbot, Institution, Interactive method, Future studies, Educational domain.

1. INRTODUCTION

Conversational agent or Chatbot is a program that generates response based on given input to emulate human conversations in text mode. These applications are designed to simulate human-human interactions. Chatbots are predominantly used in business and corporate organizations including government, non-profit and private ones. Their functioning can range from customer service, product suggestion, product inquiry to personal assistant. Many of these chat agents are built using rule based techniques, retrieval techniques or simple machine learning algorithms.

In retrieval based techniques, chat agents scan for keywords within the input phrase and retrieves relevant answers based on the query string. They rely on keyword similarity and retrieved text is pulled from internal or external data sources including world wide web or organizational database. Some other advanced chatbots are developed with natural language processing(NLP) techniques and machine learning algorithms. Also, there are many commercial chat engines available, which help build chatbots based on client data input.

All Chatbots usually search for keywords, phrases, and examples that have been customized into their databases, yet some utilize more propelled strategies. In this paper the need for Chatbot in education domain and designed to provide user satisfaction.

2. LITERATURE SURVEY

Aditya Deshpande, Alisha Shahane, Darshana Gadre, Mrunmayi Deshpande et.al paper presents on survey of various chatbot implementation techniques. The research is based on the survey of various chatbot and it is shown that how the various chatbot differs from each other's. To make chatbot the various technology has been used to make. A chatbot can be considered as a question-answer system where experts provide knowledge for solicitation of users. A chatbot is a software designed to simulate a conversation with human partner. This survey paper aims to present an overview of an existing approaches of implementing a chatbot system. In this paper it as compares various chatbot from the first chatbot ELIZA to one of the latest chatbot like ALEXA, not only this is as shown various chatbots like IBM Watson, Siri, Tay, etc. It tells us about how it is implemented and how they actually work.

The design and implementation of several chatbots are developed a detailed survey of those systems. Mukesh Kumar, Sayali Hulawale, Sahil Pandita et.al paper presents on college management Chatbot. The college inquiry chat-bots will be built using artificial algorithms that analyse user's queries and understand user's message. The User can ask the question any college-related activities through the chat-bot without physically available to the college for inquiry. The System analysis the question and then answer it to the user. The user can ask any question related to college he asks about annual day, college fees, faculty details, sports day, etc. It helps the student to be updated what is happening in the college. In this the Chatbot usually remember the previous command in order to provide the functionality. So, whatever the user ask it will remember for it, it will help the Chatbot and it can analysis it for future references. If the Chatbot couldn't

answer the query asked by the user, then the admin will answer to that question. And that question along with answer is stored in database so that whenever such questions will be asked so that they get answered directly from the database. Due to this admin doesn't need to answer same question manually anymore. The system replies using an effective Graphical User Interface as if a real person is talking to the user. The user just has to register himself to the system and has to login to the system. The chat-bots consists of core and interface that is accessing the core in (MySQL). Natural language processing technologies are used for parsing, tokenizing, stemming and filtering the content of the complaint.

Tarun Lalwani, Shashank Bhalotia, Ashish Pal, Shreya Bisen, Vasundhara Rathod paper presents on chatbot for educational institution. This chatbot can be used by any user like students faculties parents to fetch the information from the institution website. AIML and NLP is used for creating chatbots. AIML is Artificial Intelligence Mark-up Language (AIML) by using NLP can answer to user questions. Predefined knowledge base helps develop a response to the query. Chatbot for educational sector, where user (a student or parents) can ask query regarding college admission, about college information and other things related to academics. Chatbot is implemented to meet the academic needs of the visitors. The Chatbot is based on AIML language for Manipal University. This will help the student to fetch information like ranking of university, availability of services, university environment, updates regarding activities happening inside campus and many more and other academic information Rashmi S and Kannan Balakrishnan et.al [4] paper presents on to find the missing information in inquiry provided by the user. Sometimes the user will ask the query not in a proper way so that the A.I chat bot will not find the proper answer for that, it will give answer based on the keyword what the user had given or it will not answer the question. It will test the queries to gather the information that are required to answer the question. It will predict the missing data from the query so that the Chatbot should understand and reply it properly. First it will identify the missing data then it will do a querying same to provide accurate response.

3. AVAILABLE TECHNOLOGY

Chatbots are program that interact with humans using natural language. Chatbots are used in many organizational domains where it can replace humans. However, the widest application of chatbots is in the field of e-commerce for automating customer service. Chatbots help to improve customer relations as well as drastically reduce human efforts.

Here are some existing systems: ELIZA is the primary chatbot created by joseph Weinbaum utilizing a keyword coordinating strategy. The thought was to persuade the client info and look for certain keywords, if a catchphrase was discovered then the appropriate response was recovered. In the event that a catchphrase is not present then ELIZA would proceed, as per indicated principles, to get more data from the client to keep the discussion going.

Jabberwocky is one of the earliest attempts at designing an AI through human interaction. It was mainly a form of entertainment. It aimed to move from a text-based system to wholly voice operated system.

ALICE is developed by Richard Wallace in 1995. It utilizes design coordinating and stores the data in Artificial Intelligence Mark-up Language records. An AIML record is like a XML document that is created to store design information for chatbots. Code 2 gives a case of a discussion between a human and ALICE.

Watson, built by IBM is a question answering (QA) computing system designed to apply advanced natural language processing, information retrieval, knowledge representation, automated reasoning, and machine learning technologies to the field of open domain question answering.

Alexa is a voice service inhabiting the Amazon Echo device. Alexa uses natural language processing algorithms for voice interaction. She uses these algorithms to receive, recognize and respond to voice commands.

4. CONCLUSION AND FUTURE ENHANCEMENTS

In this paper we present a review on an AI neural networks based Chatbot which can be used by students, parents, faculties to know about the institution details like academics, admissions, department activities, placement cell etc. This application solves the problem of many users by giving fast responses to the respective queries.

It is often impossible to get all the data on a single interface without the complications of going through multiple forms and windows. This problem is solved by chat bot by providing a common and user-friendly interface to solve queries of college students and faculties and parents.

In future we can include both text and voice-based queries. The users will have to give voice input and the system will give the text output for better conversation systems.

5. REFERENCES

[1] Tarun Lalwani, Shashank Bhalotia, Ashish Pal, Shreya Bisen, Vasundhara Rathod, IJIRCST, "Implementation of a Chat Bot System using AI and NLP Volume-6, Issue-3, May 2018.

[2] Anupam Mondal , Monalisa Dey , Dipankar Das , Sachit Nagpal, Kevin Garda, "Chatbot: An automated conversation system for the educational domain" , IEEE 2018.

[3] Ameya Vichare, Ankur Gyani, Yashika Shrikhande, Nilesh Rathod ,IJARCET, "A chatbot system demonstrating Intelligent Behaviour using NLP Volume 4 Issue 10", October 2015.

[4] Bhavika R. Ranoliya, Nidhi Raghuwanshi and Sanjay Singh," Chatbot for University Related FAQs" 2017.

[5] Mukesh Kumar, Sayali Hulawale, Sahil Pandita," Chat-Bot for College Management System Using A.I" vol: 04, issue:11, 2017.

[6] Milla T Mutiwokuziva, Melody W Chanda, Prudence Kadebu, Addlight Mukwazvure, Tatenda T Gotora "A Neural-network based Chat Bot", 2018.

[7] Aafiya Shaikh, Dipti More, Ruchika Puttoo, Sayli Shrivastav, Swati Shinde, A Survey Paper on Chatbots,IRJET 2019.