Voice based University Information Chatbot System

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Abstract: *The main aim of our project is to use a voice-bot system for universities such that we will have our work done in less time. This paper shows that we will allow user to control this voice-bot using our voice, by remote appliances and take decisions on the end user's behalf.it helps us to monitor and control our surrounding environment whenever needed. Project mainly uses Artificial intelligence as a source. This artificial intelligence is used to chat using voice as input and sends the response to the whole university. It also takes less time to take the input and give the response back. There is a rapid growth in remote home control systems.*

I. INTRODUCTION

It is a software program. A virtual chatbot is a piece of software that is intelligent enough to mimic human interactions. Conversational bots are used in almost every customer interaction, like instantly messaging the client. Since the development of the first chatbot, they have evolved in functionality, interface, and their significance to the technical world cannot be neglected. However, modelling conversations remains a significant challenge in this field even today. Even though they are a long way from perfect, conversational agents are now used in various applications. To understand the capabilities and limitations of current chatbot techniques and architectures, a detailed survey was conducted, where interrelated literature published over the past few years is studied, and a newly presented neural network model is now trained with conversational data. Deep learning and NLP techniques are being used in advanced research and development projects, AI and ML algorithms are implemented in development of conversations. R&D (Research and Development) are still under progress and experimentation in these fields. Conversation agents are predominately used by government administrations, businesses, and non-profit establishments. They are often organized by financial institutions like banking, insurance, startup companies, online stores and social service sectors. These chatbots are implemented by large corporations as well as small startup companies. However, chatbots are not under proper implementation in the medical field. A chatbot can help patients with medical related works by assisting them via text messages, applications, or instant messaging. One can find many virtual bot development structures in the market, both interface-based and code-based.

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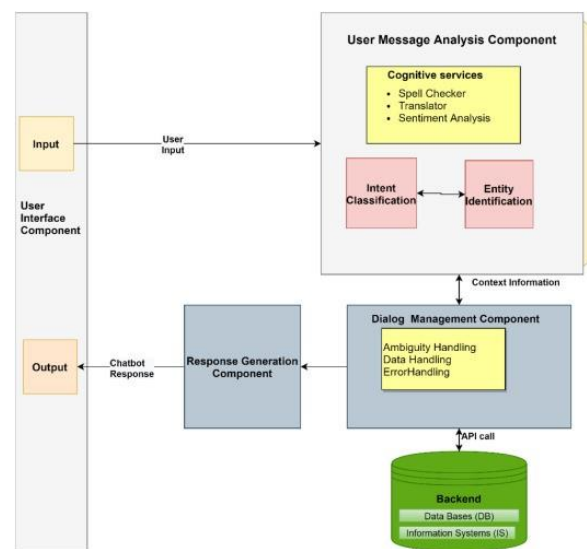
II. LITERATURE SURVEY

Basically, this chatbot system is not known to more people who are not keener towards technology. This provides accurate answers to the end user. Students have to attend to college to ask queries from the help disk. Before this chat-bot system invented in the college people having queries have to visit college from miles away to get their queries cleared.

And this chat-bot system helps students to get their queries cleared from home itself using college website itself. It leads to reduce the gap between management and students.
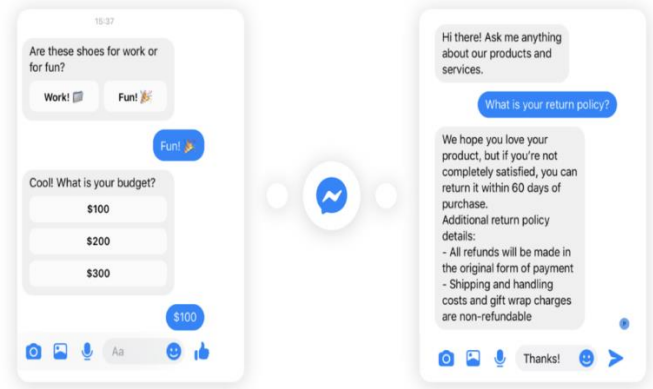
III. PROPOSED METHODOLOGY

Chat -bot is a software program that helps to interact with humans using natural language. These are used in many educational institutions where they are replaced with humans. These chatbots helps to improve customer relations as well as it reduces human efforts.

*. ELIZA is the chatbot created by joseph Weinbaum utilize a keyword. ELIZA proceeds its work as per client's requirements.

INTERNATIONAL RESEARCH JOURNAL OF ENGINEERING AND TECHNOLOGY (IRJET)
IRJET VOLUME: 08 ISSUE: 04 | APR 2021   **WWW.IRJET.NET**

E-ISSN: 2395-0056
P-ISSN: 2395-0072

TABLE I. LOEBNER PRIZED CHATBOTS' DESIGN TECHNIQUES AND APPROACHES [13]

Year	Programme Name	Winner Designer Name	Design Technique
1991	PC Therapist	Joseph Weintraub	
1992	PC Therapist	Joseph Weintraub	Canned and non-sequitur responses in addition to pattern matching after parsing, and word vocabulary that make it remember sentences.
1993	PC Therapist	Joseph Weintraub	
1994	TIPS	Thomas Whalen	A personal history model database like the system with pattern matching.
1995	PC Therapist	Joseph Weintraub	The same as in 1991.
1996	HeX	Jason Hutchens	Has got a trick sentences database, Markov Chain models, pattern matching, and a model of personal history.
1997	Converse	David Levy	A database for facts, pattern matching, proactivity, WordNet synonyms, a statistical parser, ontology, a list of proper names, and a modular of weighted modules.
1998	Albert One	Robby Garner	Hierarchical structure of previous Chatbots, such as Fred, Eliza, pattern matching and proactivity.
1999	Albert One	Robby Garner	
2000	A.L.I.C.E	Richard Wallace	Advance pattern matching, AIML.
2001	A.L.I.C.E	Richard Wallace	
2002	Ella	Kevin Copple	Language tricks, phrase normalisation, pattern matching, WordNet, and expanding abbreviation.
2003	Jabberwock	Juergen Pirner	Markov Chains, simple pattern matching, context free grammar (CFG), and parser.
2004	A.L.I.C.E	Richard Wallace	The same as in 2000.
2005	George (Jabberwacky)	Rollo Carpenter	No scripts or pattern matching, a huge database of responses of people, and they are based on the Chatbot Jabberwacky.
2006	Joan (Jabberwacky)	Rollo Carpenter	
2007	UltraHAL	Robert Medeksza	Scripts of pattern matching and VB code combination.
2008	Elbot	Fred Roberts	Commercial Natural Language Interaction system.
2009	Do-Much-More	David Levy	Intelligent Toys Commercial Property.
2010	Suzette	Bruce Wilcox	AIML based chat script with database of variables, triples and concepts.
2011	Rosette	Bruce Wilcox	
2012	Chip Vivant	Mohan Embar	Responses using unformatted chat script and AI, and ontology.
2013	Mitsuku	Steve Worswick	Based on rules written in AIML [17].
2014	Rose	Bruce Wilcox	It contains a comprehensive natural language engine to recognise the meaning of the input sentence accurately. A chat script is also included in the design [18].

IV. TECHNOLOGIES USED

There are basically 2 types of technologies used in developing a chat-bot:

I. AI

II. NLP

1. AI: - chatbots based on artificial intelligence. These are intelligent chatbot's that can respond within seconds to the end users. This AI chatbots are easy to implement and can still make impact on business areas.

2. NLP: - chatbots based on Natural Language Processing. These bots can learn overtime to respond like human.
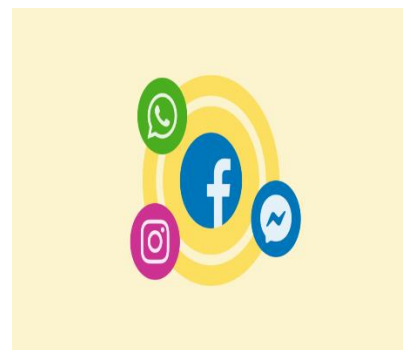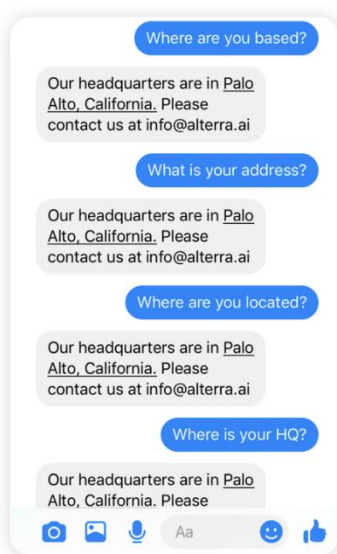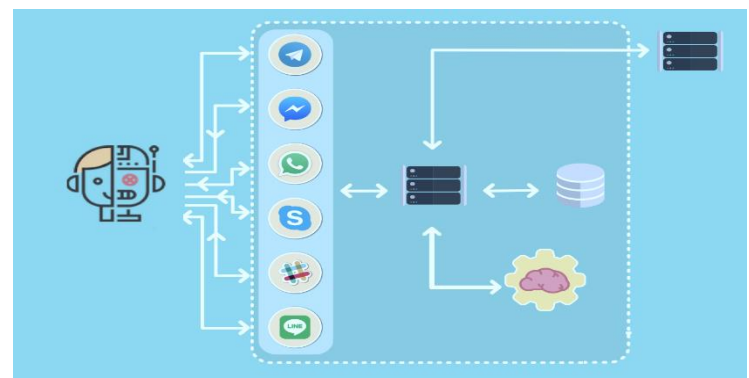

A real estate agent uses a chatbot to save time and get more profit to their business and get more clients. A restaurant also uses a chatbot to order online end to end customers. These attract prospects by showing popup window with offers. They use 100% e-commerce screens.

A Voice-Activation Technology: Amazon echo is an example for this Voice-Activation Technology.

- They are very expensive to use

- They often use a separate device

Interoperability:

Interoperability is very easy to use on social media platforms like: Messenger,facebook,whatsapp,instagram.

V. SYSTEM ARCHITECTURE

Presenters: This layer is responsible for making online calls to show a button, or video

Flow: Executes the logical operations in the Chatbot by using data with web servers and store information.

Quick Replies: These chatbots helps us to get quick responses from the server

Postbacks: Get user input to have actions from flow module.

Repositories: This contains common options that access client's data and templates from website.

Templates: These are predefined actions usually defined with NLP
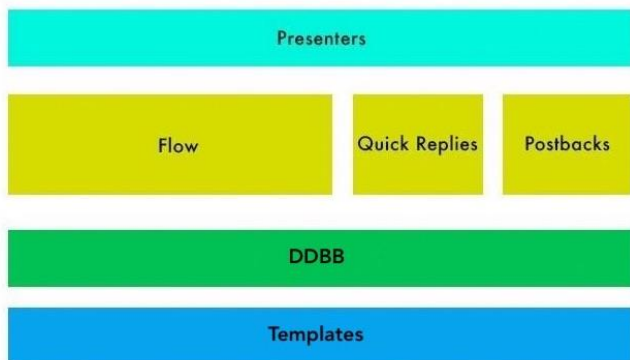
VI.RESULT

VII. CONCLUSION

In our project we implemented the chatbot (input-text-output) and also applied AIML script for both the inputs and generate the output. The main objective is to reduce the gap between user and developer. To develop a database were all the related data will be stored and to develop a web interface. The requirements were introduced and implemented. The main disadvantage is that we need to have a proper internet connection or else error occurs.

REFERENCES

[1]B. Setiaji and F. W. Wibowo, "Chatbot Using a Knowledge in Database: Conversation Modeling" pp.71–78,2016.

[2] M. T. Mutiwokuziva, M. W. Chanda, P. Kadebu, A. Mukwazvure and T. T. Gotora, "A neuralnetwork based chat bot" 2017 2nd International Conference on Communication and Electronics Systems.

[3] Kyunghyun, "Learning Phrase Representations using RNN EncoderDecoder for Statistical Machine Translation", 2014.

[4] Abdul-Kader, S., & Woods, J. (2015). Survey on Chatbot Design Techniques in Speech Conversation Systems. International Journal of Advanced Computer Science and Applications,.

[5] Nass, C., & Brave, S. (2007). Wired for speech: how voice activates and advances the human-computer relationship. Cambridge, MA: MIT Press.

[6] A Voice Controlled Smart Home Solution With a Centralized Management Framework Implemented Using AI and NLP Proceeding of 2018 IEEE International Conference M. Young, The Technical Writer's Handbook. Mill Valley, CA: University Science, 1989.

[7] Gruhn, R. E., Minker, W., & Nakamura, S. (2013). Statistical Pronunciation Modeling for Non-Native Speech Processing. Berlin: Springer Berlin.

[8] A. Khanna, B. Pandey, K. Vashishta, K. Kalia, B. Pradeepkumar and T. Das, "A Study of Today's A.I. through Chatbots and Rediscovery of Machine Intelligence", IJUNESST, vol. 8, no. 7, pp. 277-284, 2015.

[9] College Information Chat Bot System, AMEY TIWARI, RAHUL TALEKAR, PROF.S.M.PATIL International Journal of Engineering Research and General Science Volume 5, Issue 2, March-April, 2017 ISSN 2091-2730.

[10] C.K.Gomathy , K. Bindhu sravya , P. Swetha , S.Chandrika Article: A Location Based Value Prediction for Quality of Web Service, Published by International Journal of Advanced Engineering Research and Science (IJAERS), Vol-3, Issue-4 , April- 2016] ISSN: 2349-6495.

[11] DR.C.K.Gomathy , V.Geetha , S.Madhumitha , S.Sangeetha , R.Vishnupriya Article: A Secure With Efficient Data Transaction In Cloud Service, Published by International Journal of Advanced Research in Computer Engineering & Technology (IJARCET) Volume 5 Issue 4, March 2016, ISSN: 2278 – 1323.

[12] Ck Gomathy (2010) "cloud computing: Business management for effective service oriented architecture" International journel of power control signals and computation (IJPCSC),Volume 1,Issue IV,Oct-Dec 2010,P.No:22-27, ISSN: 0976-268X

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