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Elis: A Virtual Chatbot

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Abstract: A Chatbot is Artificial Intelligence computer software that can act as a conversation either through text or audio method. The core analyses a customer's data using the artificial intelligence which integrates the response with them. Different tasks can be replaced with AI bots as they are much more powerful and can perform multiple tasks simultaneously. Machine Learning techniques are basically used for getting signals and responding to that. Natural language processing allows a bot to have a conversation as naturally as possible. The ideal interaction between user and chatbot is a balanced mix of Innovative technology and human Intervention.
Keywords: Chatbot, Artificial Intelligence, Human Conversational Partner, Automated, Machine Learning

I. INTRODUCTION

A chatbot can conduct smart communication - either via text or voice. They are equipped with machine learning which can interact with humans and improves with each interaction. It recognizes using pattern matching, user input, to access information to provide a predefined acknowledgment. In dialog systems they are used for numerous practical intends consisting of Information Acquisition or Customer Service.

Keywords are scanned with the input provided by user and then respond with the most similar matching keywords or patterns from a database. Their applications make the communication between people and services, intensify the experience of customer. To have better customer engagement and operational efficiency they provide companies new opportunities by lowering the cost of customer service.

Types of chatbots used:

1) *Support:* This is used to master a single domain.
2) *Skills:* This does not require a lot of contextual awareness.
3) *Assistant:* This is the middle ground between a skill and support chatbot. When they know a littleabout a variety of topics they work great.

II. LITERATURE SURVEY

1) Kshitija Shingte et al published a paper regarding use of chatbot in development of educational institutes. The application of Chatbot helps student to know about the admission process. It helps to reduce complications with admission process by letting students and parents know about it and reduces workload of departments at the time of admissions.
2) Rohit Tamrakar and Niraj Wani published a paper regarding design and development of Chatbot. The paper reviews the terminology, techniques, and different platforms to build a Chatbot. They also represented some real-life application of Chatbots.
3) Chen-Chung Liu et al published a paper regarding children' interaction with AI based Chatbots and the impact on their interest of reading. Children usually don't like reading books, so to make them read we can use Chatbots as audio books which will create more interest in reading books.

III. METHODOLOGY

We have used Python language to build a user friendly Chatbot which can help every section of society in different ways. It can be used by children to increase their interest in studies and old aged people can use such Chatbots for online shopping and other things. It will be majorly helpful for those who are not much familiar with the new technologies and face difficulties in using applications in mobile phone. The Chatbot simply takes an input from the user in the form of audio or text and then tries to recognise the keywords spoken in the sentence. After successfully recognizing the keyword Chatbot performs the task which is linked with that keyword. If the keyword is not recognized, then it asks to give the input again. This Chatbot is also able to send emergency message to particular contact through WhatsApp. This Chatbot can also be used for fun and knowledge as it can play songs and search various things on Google which helps to increase the knowledge of students.

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IV. RESULTS AND DISCUSSIONS

We were successfully able to implement the Chatbot which takes the input from user in the form of text or audio and instantly replies to the user in the audio format.

We had discussion about the interface of Chatbot. The interface of Chatbot must be user friendly i.e., it should be easier for user to understand and handle it properly. Additionally, we have thought of making bot more versatile. The Chatbot is able to take different types of inputs in same run.

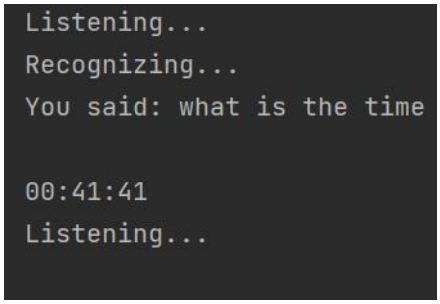


Figure 1

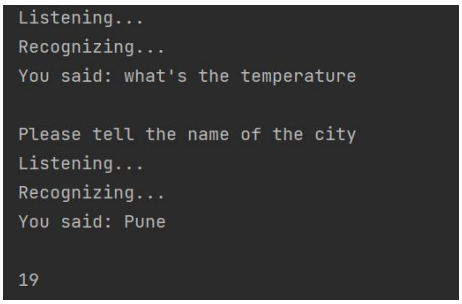


Figure 2

V. LIMITATIONS

This chatbot will give various errors unless you have downloaded various modules for successful run.

We have tried to display the temperature of various cities all around the globe through this bot, but it is only able to display temperature of specific cities accurately. The accuracy decreases when it comes to other cities.

VI. FUTURE SCOPE

1) Sending a message without making efforts to type.
2) Simple payments over live chat or Facebook Messenger apps.
3) Use of Chatbots in Contact Centres.

VII. CONCLUSIONS

This document presented a review on Chatbot, an attempt is made to understand the automated process of various chatbots by using smart algorithms. The classification of text in chatbot by using pattern matching to build, train, test it, helps in getting the desired output. We have also studied the architecture and designing process of the chatbot and understood how they interact with Humans.

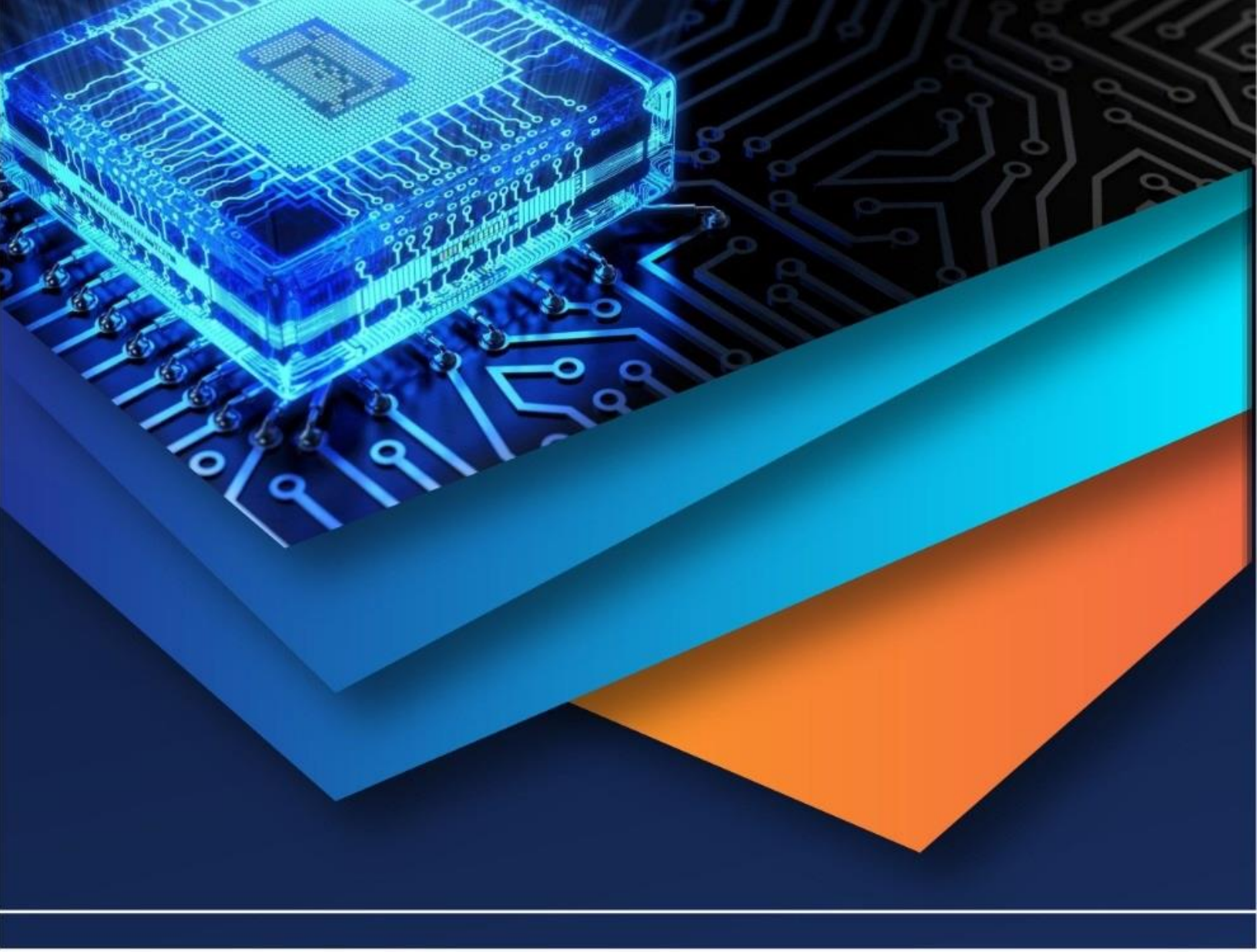
VIII. ACKNOWLEDGMENT

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