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Chatbot using Lex

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Abstract: ***Chatbot have been popular in recent times and are gaining speed as a program for communication. Some chatbot respond like humans and mimic a conversation same to same like a normal human. This is known as Chatbot This paper addresses the Design of Chatbot system We will also understand existing system and scope of the system.***
Keywords: Chatbot, Communication, Pattern Matching, Request, Response, Kommunication, Website, Amazon Web Service, Lex

I. INTRODUCTION

In today's world computers play an important role in our society? Computers give us information; they entertain us and help us in lots of manners. A chatbot is a program designed to counterfeit a smart communication on a text or spoken ground. But this paper is based on the text only chatbot. Chatbot recognize the user input as well as by using pattern matching, access information to provide a predefined acknowledgment. For example, if the user is providing the bot a sentence like "What is your name?" The chatbot is most likely to reply something like "My name is Chatbot." or the chatbot replies as "You can call me Omi." based on the sentence given by the user. When the input is bringing into being in the database, a response from a predefined pattern is given to the user. A Chatbot is implemented using pattern comparing, in which the order of the sentence is recognized and a saved response pattern is acclimatize to the exclusive variables of the sentence. They cannot register and respond to complex questions, and are unable to perform compound activities. Chatbot is relatively a new technology. The application of a Chatbot can be seen in various fields in the future. This paper covers the techniques used to design and implement a Chatbot. Comparisons are made, findings are discussed and conclusion is drawn at the end.

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. During designing a Chatbot, how does the Chatbot speak to the user? And how will be the conversation with the user and the Chatbot is very important. The design of a Chatbot is represented using diagram as follows: Fig.1: Use Case Diagram of Chatbot Design. The following facts are kept in mind during designing a Chatbot A. Selection of OS Windows is used for this project because it is user friendly. It is also robust. B. Selection of Software Eclipse software is used for programming in java. Because it contains basic workspace and it is mostly used for java applications.

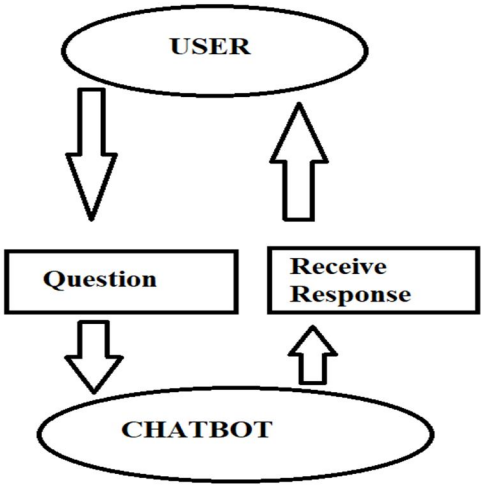

Fig1- Case Diagram of Chatbot using Lex

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The factors kept in mind when designing a chatbot are :-

1) *Selection of Operating System:* Windows is used for our project as it is user friendly. It is robust. It's has multitasking feature.
2) *Selection of AWS Service:* We have used AWS service named LEX which uses Natural Language Processing and it is the main technology behind Alexa.
3) *Creating a Chatbot:* For creating a Chatbot, we have used Lex and programmed the Intent By our Question and the Utterances by the user's point of view.
4) *Creating a Chat:* We have slots where there is an inbuilt database given by amazon so we have to select them and choose slot.
5) *Pattern Matching:* Trough this we can match an input with the saved input in amazon inbuilt database by artificial intelligence and natural language processing.

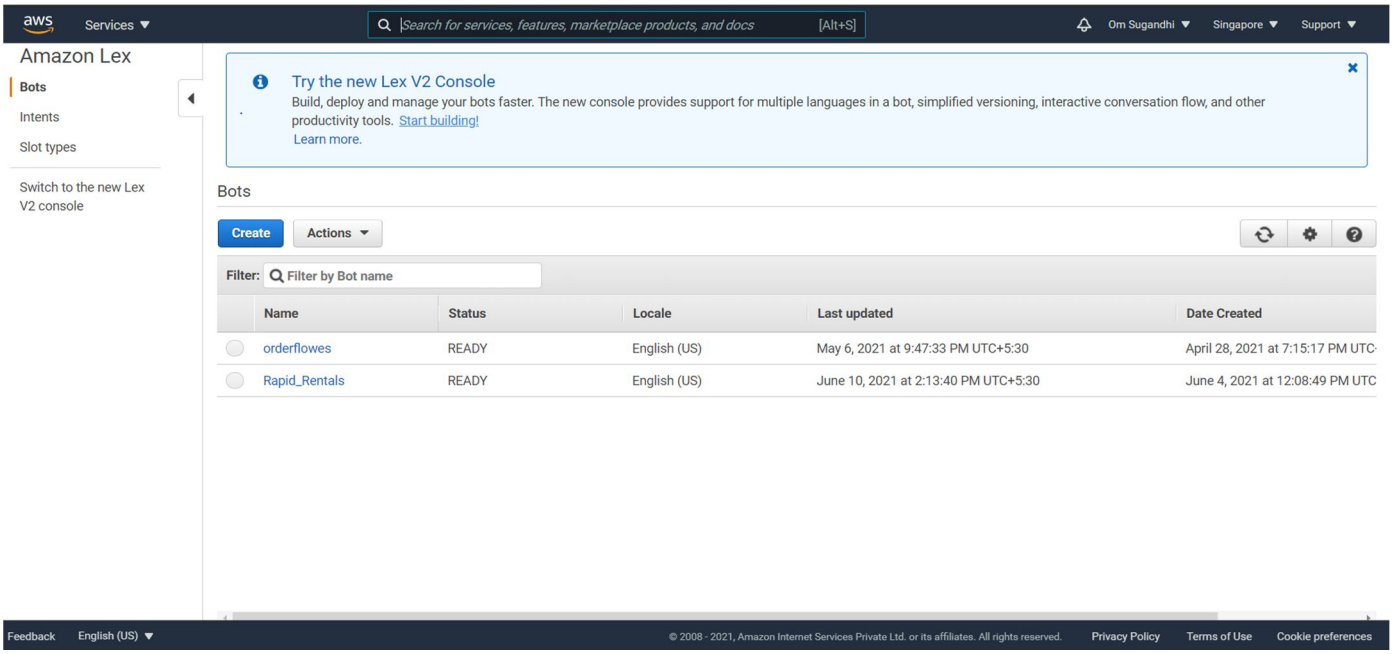

Fig-2 Creating an using Aws Lex

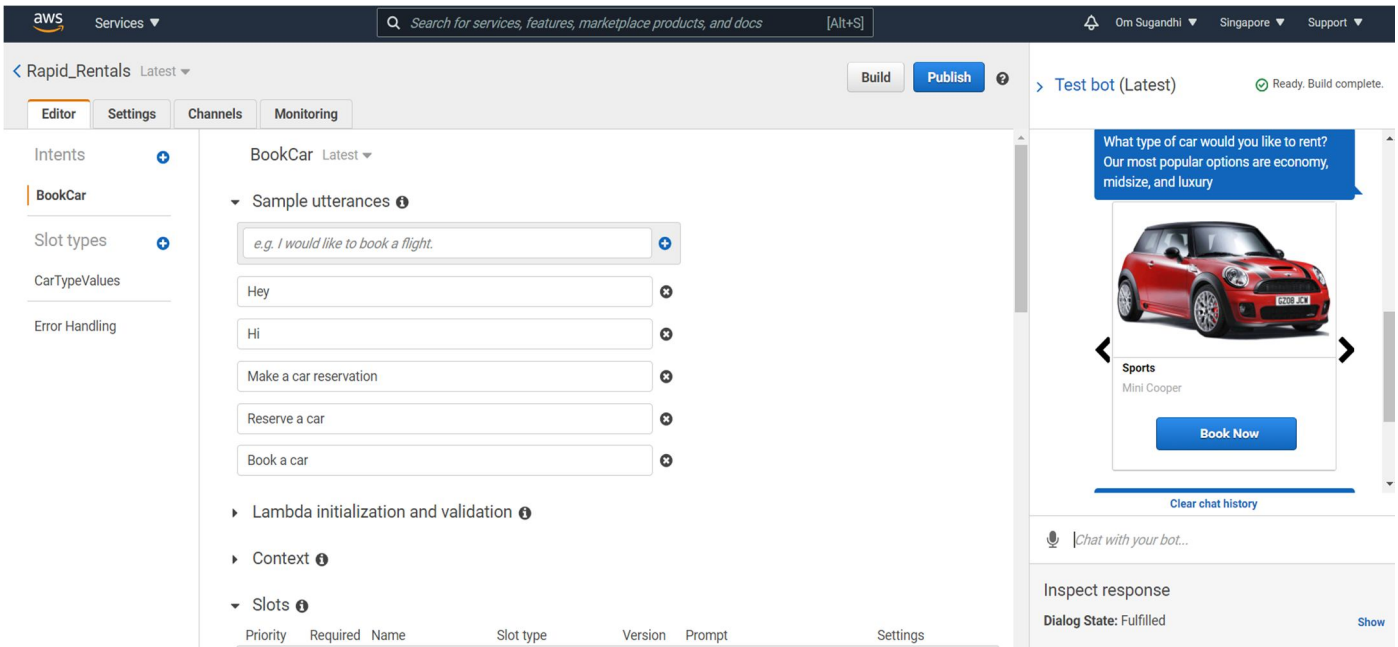

Fig-3 Building Slots and Utterances

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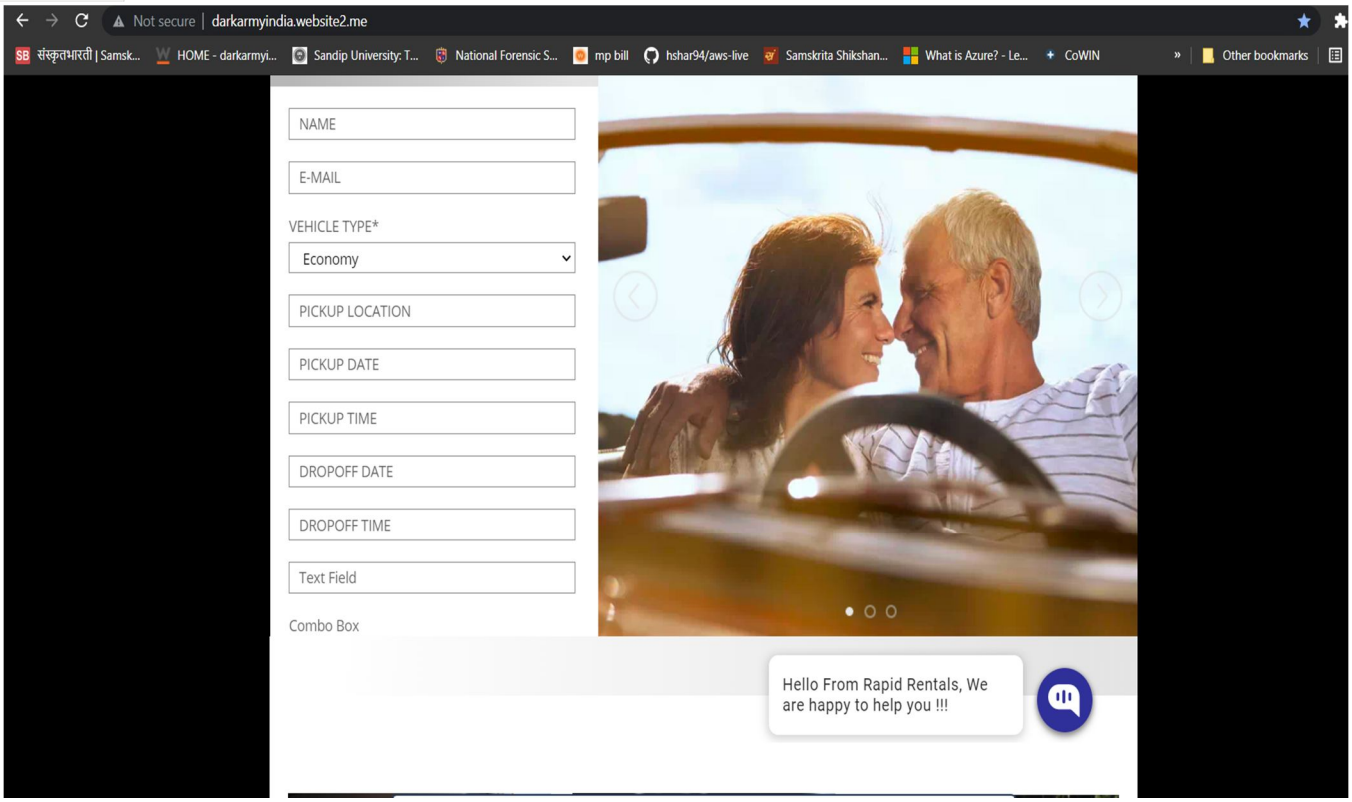

Fig-4 Implementation of Chatbot on Website

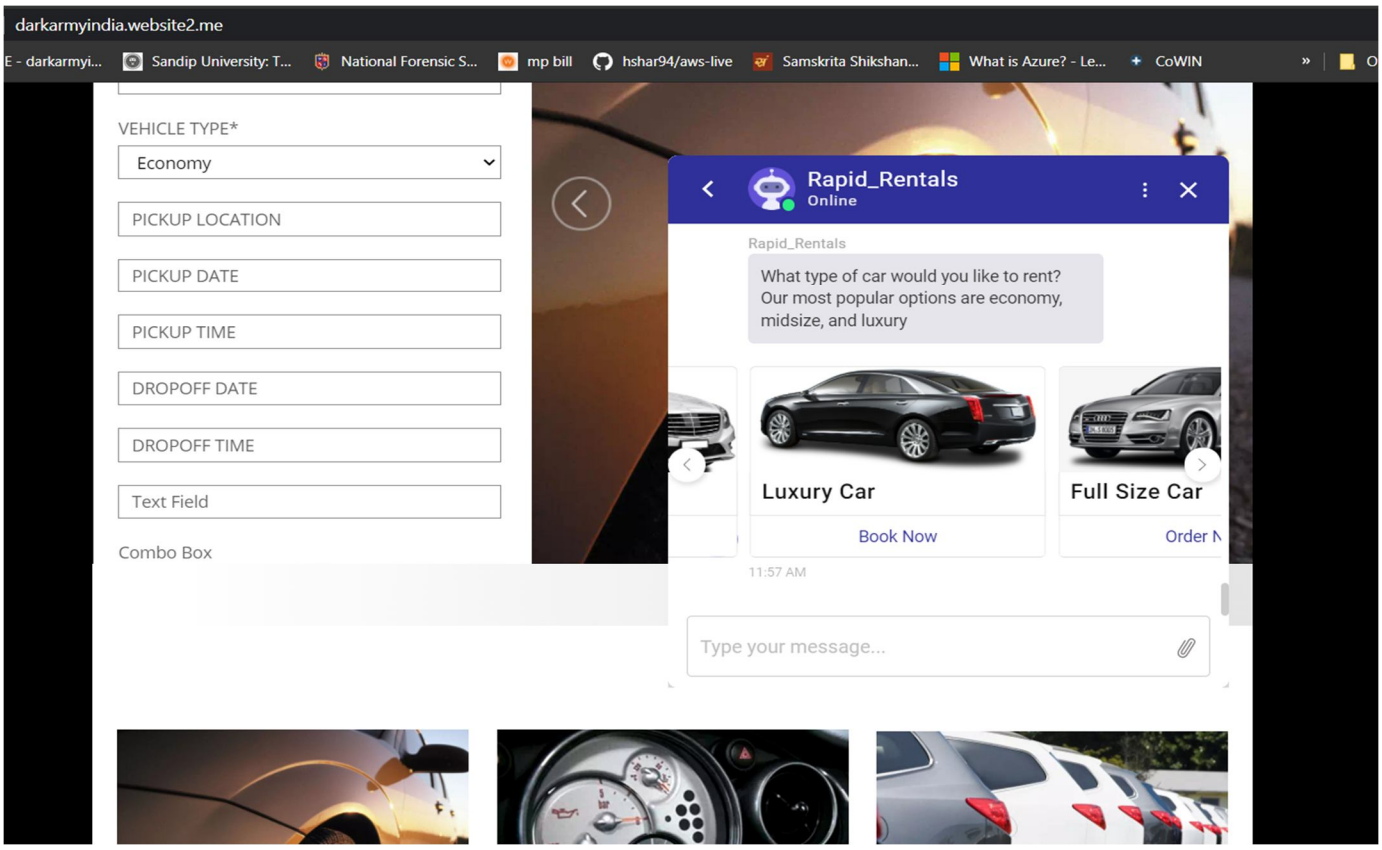

Fig-5 Results of Chatbot for Users.

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III. EXISTING SYSTEM

According to a report of a chatbot market is expected to touch $1.2 Billion globally in less than 10 years. Expert are predicting that the market will grow at compounded annual growth rate of more than 24 %.

Chatbot have become more AI Driven and capable of handling complex human interaction with ease and are now taking over traditional conversational services. Chatbots are capable in working in a variety of areas, including processing, payments and marketing.

Chatbot had an amazing year in 2017 this year the where most adopted helping improve the customer service and brand image of many tech companies.

Companies should take note that the more successful chatbots are the ones that are able to drive a good conversational experience that mimics human agents.

IV. SCOPE OF THE SYSTEM

Chatbots are also referred to as a virtual assistant. It is a rudimentary form of AI software that mimic human conversation.

The Chatbot can be analyzed and improved. We are use it on a website to order something, It can be used at Airport for self-check in and also be use in restaurant to book a meal or an order.

These bots can also learn different languages. The language the learn are stored in a database and can be learnt by asking questions to the bot.

Bots can also be a source for entertainment purpose.

Chatbots results in smart conversation and is advancing at an unprecedented rate with each new development.

V. CONCLUSION

A chatbot is of the simplest ways to transport data from a computer without having to think for proper keyword to look up in a search or browse several web pages to collect information.

Chatbot is great tool for quick interaction with the user The help in our entertainment and saves our time It will answer the questions that are hard to find.

We have multiple approach for a chatbot to built a chatbot but the developers move forward by a common approach. General chatbot must be simple user friendly must be easily understood.

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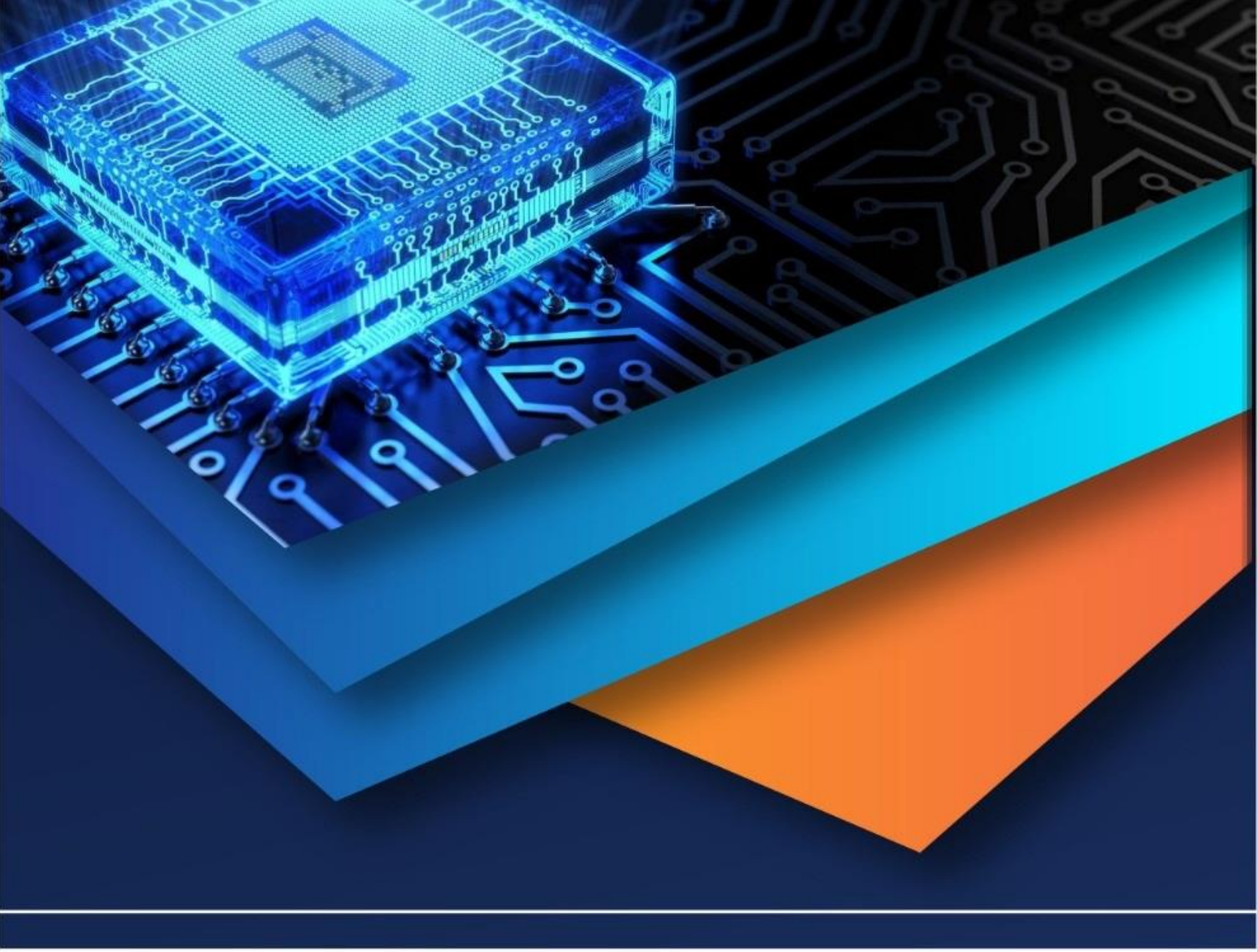

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