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Implementation of Travel Chatbot using NLP and Python

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Abstract: *This can be described as software where people can use this for chat using artificial intelligence. These works very active in such a way that where user gets a quick response for the queries they have. This helps customers to purchase products and provide better service. Computer is here used for the communication purpose using internet.*

Keywords: NLP and PYTHON

I. INTRODUCTION

The travel chatbot is fully an automated piece of the software that has conversation with users to capture and also for qualify that leads to campaign in digital marketing. At major basic level, a travel chatbot is a computer program that performs the human conversations either by written or spoken, and also allows humans to interact with digital services as there is a communication witha real person. The travel chatbot is a computer program which makes human conversation through text chats or voice commands or sometimes both. This chatbot is an artificial intelligence (AI) feature that can be used through any high messaging application. Along with artificial intelligence natural language processing (NLP), and machine learning (ML) are also the chatbot underlying technologies. These bring innovation and hence brand communication, to a fully new personalized level. This chatbot changes the world and make business better by the use of artificial intelligence, machine learning and through conversational software. By using this machine learning and natural language processing technologies business turns from complex interactions into a simple conversation. A person who develops applications that helps the customer services and that automates the services with users is a chatbot developer.

II. PROBLEM IDENTIFICATION

Here there's is no assistant to deal with tourists problems that's when chat bot solves the issues and come into the pictures. The users travel experience becomes miserable if they don't have any guide to show themthe correct route like a friend. When being in a foreign land, they feel helpless in case of emergency or in critical conditions. These people face lot of problems due to technical issues andun available of website and unable to find user friendly interfaces. By this tourist can save their precious time.

III. METHODOLOGY

Natural Language Understanding refers to the state of being able to interpret the given input text byuser. Intent Classification is been used to achieve it.

- NLP Transfer Learning: It is a transfer learning approach or a method that is been used for classifying the given input text bya user.
- Named Entity Recognition and Phrase Matcher: Named Entity Recognition is used by the chatbots in order to recognize the locations and dates in the given input query by a user. Phrase matcher used to differentiate between the originand final destination in the given input query provided by a user.

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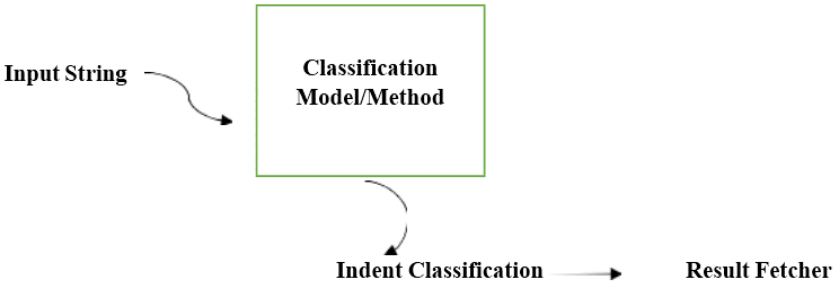
3.1 Flow Diagram



V. IMPLEMENTATION

```
function getBotResponse(input) {


    // Simple responses
    if (input == "hello")
        { return "Hello
        there!";
    } else if (input ==
        "goodbye") {return "Talk
        to you later!";
    } else if (input == "I want to travel")
        { return "Sure, what place are you going
        to?";
    }
    else if (input == "I want to go
        Mumbai") {return "Sure, when?";
    }
    else if (input == "I want to go to
        Kerala") {return "Sure,
        when?";
    }
    else if (input == "can you book a bus
        for me") {return "Sure, when you
        want to go?";
    }
    else if (input == "also book room for me
        please") { return "Sure, and which place
        you want to stay?";
    }
    else if (input == "on Monday morning please") {
        return "sure sir your ticket is booked soon u will get message";
    }
    else if (input == "in hotel please") {
        return "sure sir how many rooms do u need?";
    }
    else if (input == "two rooms please") {
        return "sure sir your room is booked soon you will get message";
    }
else {
    return "sorry I did not understand"
}
}
```

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V. TESTING

TEST CASE NO.	TEST CASE	INPUT	EXPECTED OUTPUT	OBTAINED OUTPUT	RESULT
1	Understanding	User input	User input is understood by chatbot. Like small talk,idioms,emojis...	User input is understood by chatbot.	Pass
2	Answering	User input	Chatbot answers context relevant and accurate enough and they fit right for the moment and context.	Chatbot answers the relevant queries asked by the user.	Pass
3	Personality	User input	Chatbot has a clear text suitable for the user and conversations.	Users are able to get chatbot's replies.	Pass
4	Efficiency	User input	Time saving quick response for the users query.	Quick response has been observed.	Pass
5	Error Management	User input	Chatbot handle errors and exceptions	Error management has been achieved.	Pass

VI. RESULTS

1. The travel chatbot are very beneficial because of gaining more knowledge about user's interestand preference and all.
2. This can easily affect on large number of users and real-world travel agents.
3. Our travelbot can answer many users at a time so it is use full in time management
4. This travel chatbot helps in services in travel plans like hotel location, car rentals flight bookings etc.
5. Travel chatbot can simulate an intelligent conversation in natural language.

Fig. 1 SNAPSHOT 1

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