International Journal of Trend in Scientific Research and Development (IJTSRD)
Volume: 3 | Issue: 4 | May-Jun 2019 Available Online: www.ijtsrd.com e-ISSN: 2456 - 6470

Chatbot for Railway using Diloug Flow

Satyanarayana[1], Rajesh Budihal[2]

[1]PG Scholar, [2]Assistant Professor
[1,2]Department of MCA, School of CS and IT, Jain (Deemed to be University), Bangalore, Karnataka, India

How to cite this paper: Satyanarayana | Rajesh Budihal "Chatbot for Railway using Diloug Flow" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-3 | Issue-4, June 2019, pp.1618-1620, URL: https://www.ijtsrd.com/papers/ijtsrd25106.pdf

IITSRD25106

ABSTRACT

Chatbot is a program or a virtual person who can speak effectively to the human beings using Artificial intelligent and using interactive skills. Today the main challenge of the chatbot is to which will look like human brain with all knowledge. Now a days there are many chatbot related to cloud based which helps for improvement and development mainly like IBM Watson, Amazon lex etc.,[6] Chatbot are become more famous as it reduce the customer service jobs and also client burden with handling multiple users at a time. As it want to perform multiple task in same process, we need to make chatbot as efficient as possible. To address this problem, here we are providing some different design of a chatbot which will provide an exact replies to the query based on the dataset of FAQs using Dialog Flow.[5] Here we used railway related information such as source and destinations timings and also seat availability etc.

Keywords: *Dialog Flow, Chatbot, Railways*

I. INTRODUCTION

Chatbot is a computer program mainly powered by machine learning techniques, on the top of the multiple application such as viber, messenger and skype. There is a drastic change in the world where everything is going through web. It is user-friendly so that we can get to know everything easily and quickly. [6] There are different types of customer services like live chat, support service and also the telephone service.

But all these type of service will take huge time to give answer to the customer query.If it contain many clients the waiting time also will be increase as well the result will be poor client satisfaction. Chatbot are completely different compare to the human accounts as it don't have to maintain the online status or last seen time stamp. A chatbot is a fast with less confusing web which is easy to install as there is no need to have the installation package. Most of the chatbot are mainly search for the keywords, Phrases, examples that have given into the database.[1] Chatbot is slowly replacing by the applications on the field of the devices because of their easy use and intelligence. According to the report almost 80% are using the chatbot services or they may plan to use chatbot by 2020. The ideal chatbot should have ability to understand the context of a conversations. As we know the people were facing the problems to use railway applications, So to overcome we are building the railway chatbot using dialog flow, so that users can ask the queries and can get the answers from the chatbot. So by this the user can save the time and no need of installing the any applications of railway user can use the Facebook messenger to ask the quires.

II. LITERATURE SERVEY

We will see the different literature review and also the uses of it.

2.1Educational chatbot by using Android:

The main purpose of using the android application is to provide educational chatbot for impaired people. This chatbot will give provide the answers based on the educational queries asked by the students and also by the impaired people[1]. By using this the google voice search they can easily launch the application after opening the application it will provide the instructions to use we want to follow the rules by that we can use application output will be given be given by text. This application can be used by the normal people who don't have a experience of using the application by listening the rules.

2.2. Operations and customer support by using Artificial intelligence (AI) :

Before there was very few products in the websites so that we can know about the products easily as it is increasing the products in the website so we require a customer support teams to help the customer in the form of providing answers about the products [2]. So they introduced chatbot in customer without having the human interaction. To accumulate the data in the database they are using artificial intelligence and they used Artificial intelligence mark-up language (AIML) as language so easily we can solve the problem of customers through support.

2.3. Climebot: Climate change by using API.ai :

When the expert told about the global warming is real this is not reached to all the society level. Their aim is to develop the conventional agent should explain the issues about the global warming [3]. Based on the human agent question the answer should be conveyed properly so they implemented a chatbot for conveying answers about the issue of global warming. To improve the capabilities of chatbot there used API.ai framework. This chatbot is for textual communication.

2.4. Home Automation using IOT and also a chatbot using natural language processing (NLP) :

By using IOT we can control the fans, lights and other electrical appliances so they came with the web application that which fans, lights and other electrical appliance can be controlled over the internet. So firstly we need chatbot algorithm so that the users can request the switch of the light and fans accordingly [4]. This will be done by using the NLP techniques. Secondly those people who are in the same LAN can access the application and devices. Thirdly the security should be given to the particular user for accessing the applications and devices.

III. HISTORY OF CHATBOT

ALIZA is a first chatbot introduced in the year 1996 by Joseph Weizenbaum. It can help in making the pattern matching for the human communication. It also provide natural dialogues with the help of scripts by using these scripts the ELIZA will responds for the dialogues accordingly. It uses the JavaScript as a language for implementation.

PARRY is the second bot introduce in the year 1972 by Psychiatrist Kenneth Lolby. It has the same structure when compared with ALIZA. It also uses JavaScript as a language for implementation.

ALICE is introduced in the year 1995 ALICE will store the conversation pattern in the form of AIML format which is written in the English and it have a Natural language processes(NLP).

IV. EXISTING APPLICATIONS

We have many existing application chatbot in some areas such as education, for providing the responds to the student quires about the education[1][2]. We also have in insurance and also in customer support and in the agriculture to help the people for providing about the field and also how to maintain the field.

V. PROBLEM STATEMENT

If we see in the railway we have some applications provided by the IRCTC for the user to get the information about the railway. But we have some issues like with IRCTC application we need to download the application and also if we have large amount of traffic it is difficult to get the information. It consist of lot of time to the user to browse the information.

VI. PROPOSED SYSTEM

In this paper I am proposing chatbot for railway by using the dialog flow. In this chatbot the user can get the information easily like PNR status, seat availability, cancelling the ticket etc by using applications like messenger, facebook etc. So by using this chatbot we can save the time instead of wasting lot of time using application. No need of installing the application just you can open your Facebook account and can ask the quires. And you required proper internet connection.

VII. ARCHITECTURE

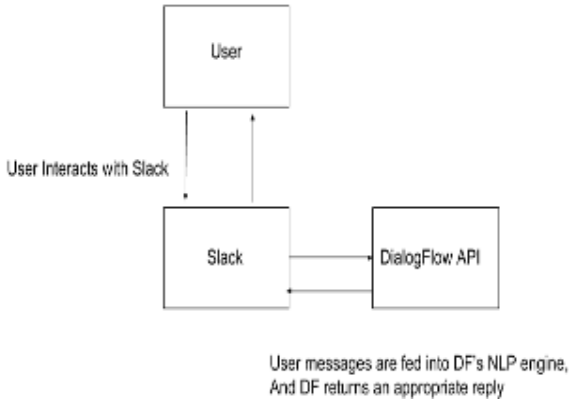

Fig no1.1: Desing of chatbot

As I discussed before we use Slack interface like Facebook messenger to end the messages to the DialogFlow. DialogFlow NLP engine intent will understand about the user queries and will search for the matching words according it provide the answer.

VIII. FLOWCHART

We will create intents to know how the conversation will work this will map to answer for responds. It will sent to the evaluate input so it will go to the entities it is like checking the exact word by using the natural language processing.

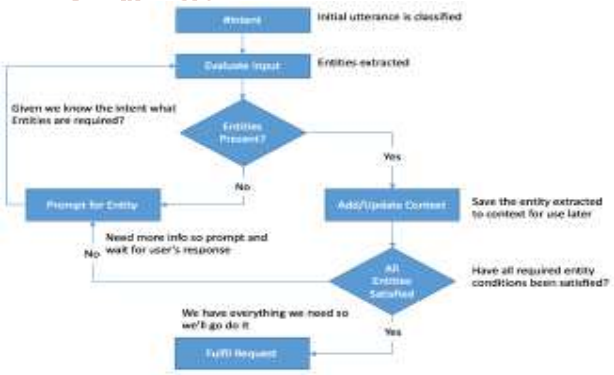

Fig no1.2: Flowchart of chatbot

If we don't give entities if it did not match it will search for exact quires if it find any entities found then it will match with that word and will give responds.

IX. IMPLEMENTATION

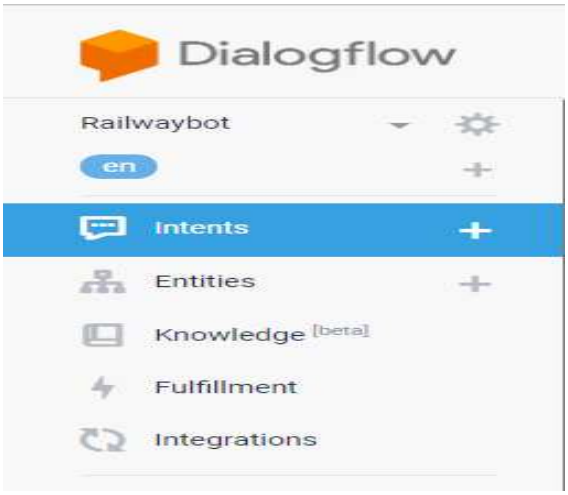

Fig no 1.3: Contents in Dilougflow

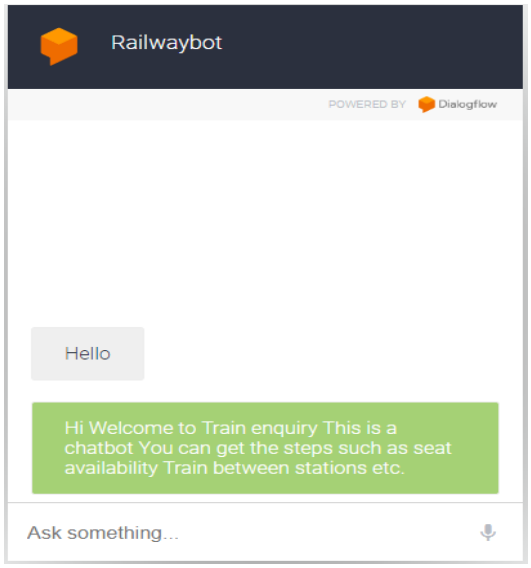

Fig no 1.4: Details provided by Train

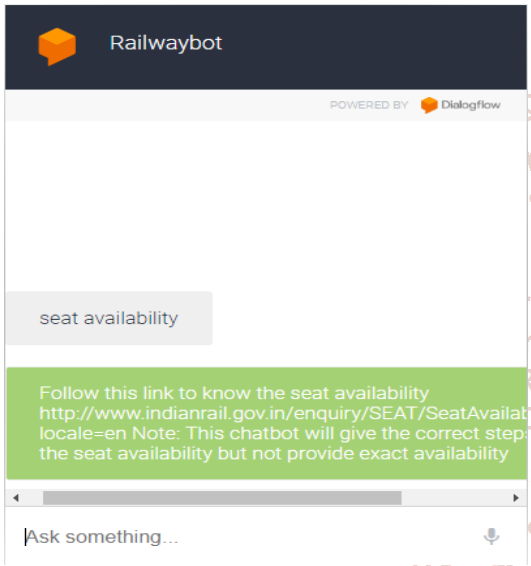

Fig no 1.5: Seat Availability

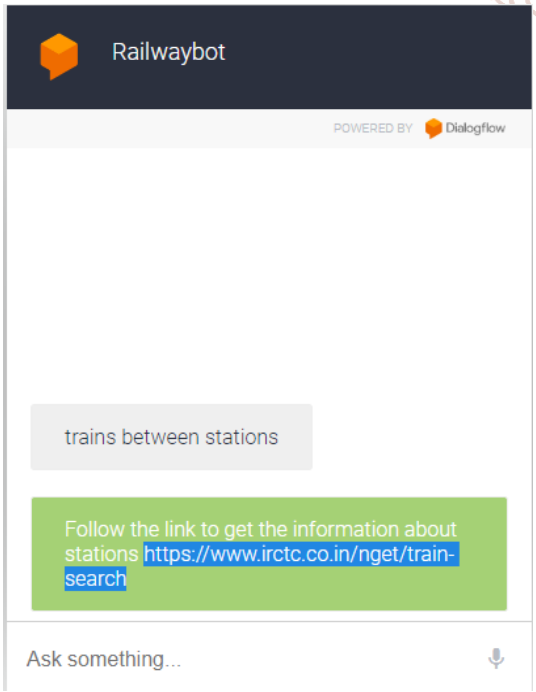

Fig no 1.6: Trains between stations

X. CONCLUSION

Chatbots are clever enough to respond multiple types of queries given by the users. The proposed application can be able to analyse exact steps and capable of providing appropriate results. Here the APIs like "Dialogue Flow" provided best interaction results. This work mainly concentrates on chat bot applications for Trains. Here any user can interact and can get information regarding seat availability, PNR Status, Ticket booking and cancellation. The developed application provides good performance in terms of accessibility, maintenance and easily upgradation.

XI. REFERENCE

[1] Naveen Kumar M, Linga Chandar P C, Venkatesh Prasad A, Sumangali K-—Android Based Educational Chatbot for Visually Impaired People||, Issue, 2016

[2] Ravi Santosh Arvapally, Hasan Hicsasmaz, Wally Lo Faro-—Artificial Intelligence Applied to Challenges in the Fields of Operations and Customer Support||, Issue, 2017.

[3] Daniel Toniuc and Adrian Groz- —Climebot: an argumentative agent for climate change||, Issue, 2017

[4] Sören Blom, Matthias Book, Volker Gruhn- —Executable Semantics of Recursively Nestable Dialog Flow Speciation for Web Applications||, Issue, 2008

[5] Guo Chunfang , Wu Hao, Sun Zhongyue Guan Zhongliang- —Study on the Public Information Service Systems of Railway Industry||, Issue, 2010

[6] Cyril Joe Baby, Faizan Ayyub Khan, Swathi J. N.- —Home Automation using IoT and a Chatbot using Natural Language Processing||, Issue , 2017

[7] Sahaya Sakila.V, Akshat Shrivastava, Md Arman Ansari, Laxmi Kanta Kar, Mukul Kumar, "RAILBOT: A Railway (IRCTC) Chatbot", 2018 IJESC.

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

[9] https://www.analyticsvidhya.com/blog/2018/03/how-to-build-an-intelligent-chatbot-for-slack-using-dialogflow-api/