

HOTEL BOOKING CHATBOT

ABSTRACT:

Booking hotels through the internet has become a great thing but still in terms of user-friendliness, it needs to improve. Also, the security of such websites is not known properly. Thus, we are going to create an AI-based hotel reservation Chatbot that is not only user-friendly but also highly secure.

There is no need to type. Instead, the user speaks to the **Chatbot**. The **Chatbot** just like humans' book tickets that is gather all relevant information, does the money transaction securely and even provided AI based suggestions that are apt for you. The creation of this will lessen time consumption rapidly and will be the easiest way to book tickets like never before.

INTRODUCTION:

A Chatbot is a piece of technology that allows a computer program to communicate with people just like conversing through text messaging using a natural language, say English, to accomplish specific tasks. A Chatbot is also known as an artificial conversational entity (ACE), chat robot, talk bot, chatterbot or chatterbox.

The first Chatbot was made in the year 1966 at the MIT AI Laboratory, named Eliza whose purpose was to give an accurate simulation of a human conversation. It was a simple program designed to impersonate a psychotherapist and give out predefined responses to user queries. However,

The code base was exhaustive enough to take into account several possible queries and the Chatbot was capable of passing the Turing Test, a test designed to check out whether a computer program could pass as an actual human being or not.

Chat bots today, have become a lot more advanced since then, able to answer substantially complex queries and have expanded capabilities such as voice interaction and machine learning.

PURPOSE:

Chatbots are being made to ease the pain that the industries are facing today. The purpose of chat bots is to support and scale business teams in their relations with customers. It could live in any major chat applications like Facebook Messenger, Slack, Telegram, Text Messages, etc.

Chatbots may sound like a futuristic notion, but according to Global Web Index statistics, it is said that 75% of internet users are adopting one or more messenger platforms. Although research shows us that each user makes use of an average of 24 apps a month, wherein 80% of the time would be in just 5 apps. Undoubtedly among them are Facebook Messenger, Snapchat, Whatsapp, WeChat etc. This means you can hardly shoot ahead with an app, but you still have high chances to integrate your Chabot with one of these platforms.

Wouldn't it be great if someone could ease your pain by helping you out 24*7 making your work easier and less hectic? Chat bots can do just that

APPLICATIONS OF CHATBOTS IN BUSINESS:

1. Accessible anytime
2. Handling Capacity
3. Flexible attribute
4. Customer Satisfaction
5. Cost Effective
6. Faster On boarding
7. Work Automation
8. Alternate sales channel
9. Personal Assistant

EXISTING SYSTEM:

A SURVEY OF VARIOUS CHATBOT IMPLEMENTATION TECHNIQUES

Today is the era of intelligence in machines. With the advances in Artificial Intelligence, machines have started to impersonate different human traits today. Artificial intelligence conversational entities, also called chat bots, are an excellent example of such machines. Chat bots are computer programs capable to carry out near - natural conversation with people. In this work, we describe the evolution of chatbots from a rudimentary model to an advanced intelligent system. Chatbots are currently gaining a lot of popularity especially in business sector as they have the potential to automate customer service and reduce human efforts. For a chatbot to perfectly emulate a human dialogue, it must analyze the input given by a user correctly and formulate a relevant and appropriate response. Keywords: Chat bots, OCR, Information

PROPOSED SYSTEM:

Our hotel reservation Chabot is one kind of a unique bot. Our bot is a bot which books hotel tickets instantly. No matter where you are you can book rooms even from your house. This bot is integrated with telegram which means you can interact with it in telegram which makes it easy for customers to book hotel rooms.

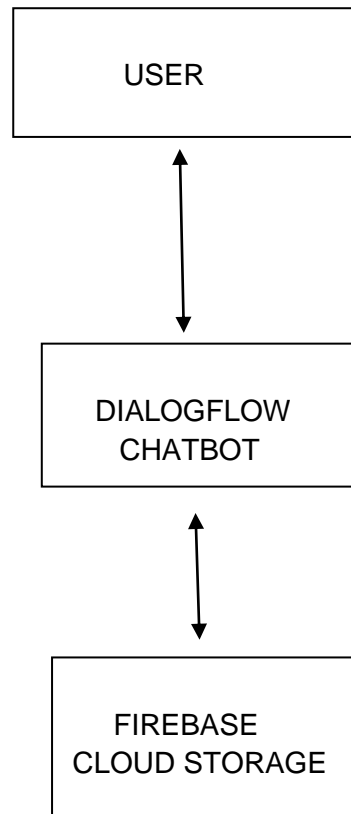
This bot called the hotres bot meaning “Hotel Reservation” bot will ask you the questions necessary to book rooms in a hotel.

We can book rooms according to our convenient date and number of people. The bot is capable of storing the information you have given to it. Thereby you can have access to your booking information anywhere and anytime. The information is stored in a database called Firebase. Suppose you have entered wrong information there are features for changing it. Thus it makes booking easier like never before.

KEY BENEFITS:

- Interaction making easier booking
- Know the booking status anytime
- Faster and time saving booking
- Reliable
- No need for middlemen

FUNCTIONAL BLOCK DIAGRAM:



CODE:

```
'use strict';

const functions = require('firebase-functions');
const admin = require('firebase-admin');
const {WebhookClient} = require('dialogflow-fulfillment');
const {Card, Suggestion} = require('dialogflow-fulfillment');

admin.initializeApp({
  credential: admin.credential.applicationDefault(),
  databaseURL: 'ws://pizza-order-ssfsgwx.firebaseio.com/'
});

process.env.DEBUG = 'dialogflow:debug'; // enables lib debugging statements

exports.dialogflowFirebaseFulfillment = functions.https.onRequest((request, response) => {
  const agent = new WebhookClient({ request, response });
  console.log('Dialogflow Request headers: ' + JSON.stringify(request.headers));
  console.log('Dialogflow Request body: ' + JSON.stringify(request.body));

  function welcome(agent) {
    agent.add(`Welcome to my agent!`);
  }

  function fallback(agent) {
    agent.add(`I didn't understand`);
    agent.add(`I'm sorry, can you try again?`);
  }

  function handleRoomBooking(agent) {
    const text = agent.parameters.text;
    const email = agent.parameters.email;
    const bookingdate = agent.parameters.bookingdate;
    const adult = agent.parameters.adult;
    const children = agent.parameters.children;
    const rate = agent.parameters.rate;
    return admin.database().ref('data').set({
      first_name: 'syed',
      last_name: 'mujtaba',
      text: text,
      email: email,
      bookingdate: bookingdate,
      adult: adult,
      rate: 'Rs. 5100',
      children: children
    });
  }

  function MyRoomBookings(agent) {
    return admin.database().ref('data').once('value').then((snapshot) => {
      const value = snapshot.child('text').val();
      const text = snapshot.child('text').val();
      const email = snapshot.child('email').val();
      const bookingdate = snapshot.child('bookingdate').val();
      const adult = snapshot.child('adult').val();
      const children = snapshot.child('children').val();
      if (value !== null) {
        agent.add(`You have a Room Booking for ${adult} adult and ${children} children in the name of ${text} on the ${bookingdate}.`);
      }
    });
  }

  function RoomBookingyes(agent) {
    return admin.database().ref('data').once('value').then((snapshot) => {
      const value = snapshot.child('text').val();
    });
  }
});
```

```

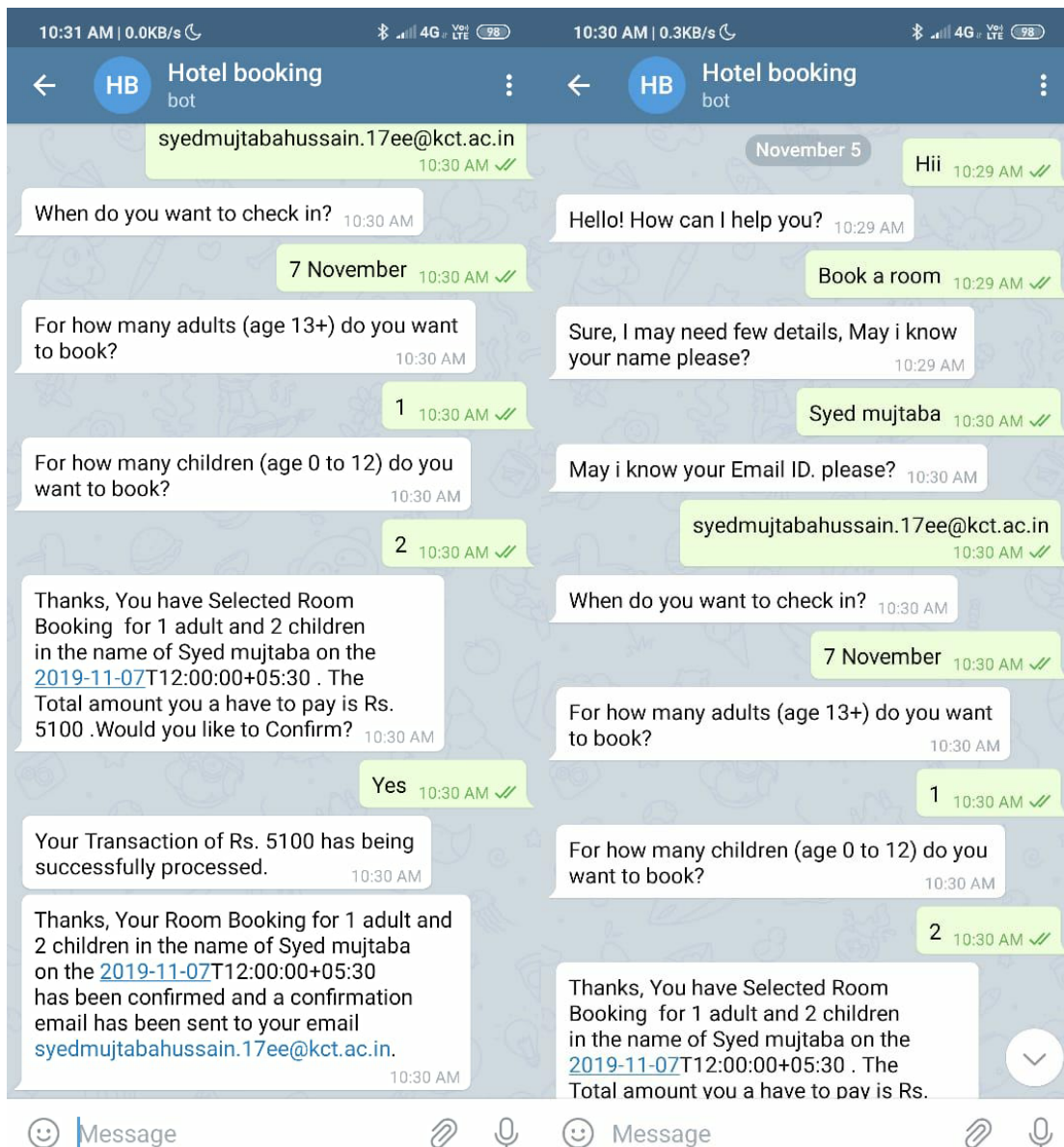
        const rate = snapshot.child('rate').val();
        const text = snapshot.child('text').val();
        const email = snapshot.child('email').val();
        const bookingdate = snapshot.child('bookingdate').val();
        const adult = snapshot.child('adult').val();
        const children = snapshot.child('children').val();
        if (value !== null){
            agent.add(`Your Transaction of ${rate} has being successfully processed.`);
        }
        if (value !== null){
            agent.add(`Thanks, Your Room Booking for ${adult} adult and ${children} children in
the name of ${text} on the ${bookingdate} has been confirmed and a confirmation email has been
sent to your email ${email}.`);
        }
    });
}

let intentMap = new Map();
intentMap.set('Default Welcome Intent', welcome);
intentMap.set('Default Fallback Intent', fallback);
intentMap.set('RoomBooking', handleRoomBooking);
intentMap.set('MyRoomBookings', MyRoomBookings);
intentMap.set('RoomBooking - yes', RoomBookingyes);

agent.handleRequest(intentMap);
});

```

SIMULATION ON TELEGRAM:



Conclusion:

Chatbots or smart assistants with artificial intelligence are dramatically changing businesses in almost all sectors such as e-commerce, retail, banking, leisure, travel, healthcare, and so on.

Also, chatbots can reach out to a large audience on messaging apps and be more effective than humans. They may develop into a capable information-gathering tool in the near future. Thereby, making them unavoidable in the near future.

“CHATBOTS ARE THE FUTURETOPS”