

Human-to-Machine Conversation Modeling for Movie Ticket Booking using NLP

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Abstract- Chatbots are software agents that interact with the user in a conversation. The main goal of their creation was to resemble a human being in the way they perform said interaction, trying to make the user think he/she is writing to another human being. Proposed Chatbot uses natural language processing (NLP) to analyze chats and extracts intent of the user with a score similar to the likes of WIT. Then it uses this information and AIML (Artificial Intelligence Mark-up Language) to make a conversation with the user.

Keywords-AIML, UI, Artificial Intelligence, Database, Chatbot.

I. INTRODUCTION

It is a semi-automatic intelligent chatbot called Chappie. The entire concept concentrates on the bot only and not the human element of the overall system. The long-term idea is to slowly get rid of humans by improving on algorithms and design of system. An intelligent chatbot must be powered by AI/NLP to reply coherent messages at least from the business point of view. Response cannot be generated based on probability that is self-curated and not generated by pattern extraction algorithms, is the proper way to respond. System cannot entirely depend on AIML, but it cannot get rid of AIML.

The three-vital standard of an insightful Chatbot are as per the following -

- Understanding rather than memorization
- Ability to handle repetitive queries
- AIML based response mechanism

Chatbots extensively are utilized for the shrewd right hand applications. In like

Manner, they create reactions from the client's information. The chatbot need an ability to break down regular dialect discourse present useful chatbot applications, showing that chatbots are found in regular daily existence. Making a chatbot in perspective of film ticket booking. This chatbot will answer client's question, for example, identified with motion picture, games, occasion, and show. Creating bot check be a fun and fascinating method for applying software engineering learning while additionally investigating subjects, for example, characteristic dialect handling and general content preparing Chatbots are PC programs that connect with clients utilizing common dialects. This innovation began in the 1960's; the point was to check whether chatbot frameworks could trick clients that they were genuine people. Notwithstanding, chatbot systems are not

just worked to impersonate human discussion, and engage clients.

II. AIMS AND OBJECTIVE

a) Aim

1. The projects aims at creating a movie booking chatbot that can take users requirements at once and provide effective results by applying AIML.
2. To effectively predict user's location and recommend movies based on user input details like age, gender, location, etc.
3. To provide a hassles booking service wherein user details are taken without any navigation along pages.

b) Objective

The main objectives of movie ticket booking manage the detail of seat, booking, customer and shows. It deals with all data about seats, motion picture, and show. The motivation behind undertaking is to assemble an application program to Manual work of overseeing seat, booking, motion picture, and client It tracks all insight about the customer, payment, demonstrates the primary reason for chatbots is to help business groups in their relations with clients, by offering accuracy, personalization, practicality and flexibility Movie chatbot will be available online 24/7, being AI-based, they don't need to be download, easy to improve/customize etc.

III. LITERATURE SURVEY

A Chatbot is system implemented by many researcher to support various types of platforms. Most of them are customized for particular platform. We have examined two systems based on this technology:-

Paper1: Title of Existing System or Paper: Odeon's Chatbot for Movie Ticket Booking

Odeon's chatbot, developed by social technology company Gruvi, requires user to like the brand's Facebook page and then either click "Message" or type "Odeon" into a chat search. The bot then informs the customer of nearby cinemas or where, and what time, their selected film is showing. Once a decision has been made, the customer is sent a link to a booking page.

Paper2: Title of Existing System or Paper: Design of Chatbot with 3D Avatar, Voice Interface, and Facial Expression.

This paper specifies chatbot that respond in 3D avatar, voice detection, face expressions, gestures. Distinguish the voice with too many unneeded noise.

Paper 3: An Internet Relay Chatbot Using AIML:

A chatterbot (also known as a talkbot, chatbot, "Bot", chatterbox, Artificial Conversational Entity or similar) is a computer program which conducts a conversation via auditory or textual methods.

Paper 4: Smart Answering Chatbot based on OCR and over generating Transformations and Ranking.

Paper 5: Chatbot Using a Knowledge in Database.

Paper 6: An intelligent web-based voice chatbot.

IV. EXISTING SYSTEM

Odeon's chatbot, developed by social technology company Gruvi, requires user to like the brand's Facebook page and then either click "Message" or type "Odeon" into a chat search. After a greeting from the bot

Users are asked for their location or what film they are interested in seeing. The bot then informs the customer of nearby cinemas or where, and what time, their selected film is showing. Once a decision has been made, the customer is sent a link to a booking page. This is developed in "EUROPE" for Odeon's Cinemas. After several months of development, ODEON launched on 28 November a Facebook Chatbot that helps user discover what is playing in cinema near them and book tickets. The chatbot, accessible through the official ODEON Facebook page, has been developed by Gruvi. Chatbots are emerging technology that leverage messaging habits to help business communicate more efficiently to their clients. Chatbots intermediate and help users with specific task. The future scope is limitless. First there was traditional ticket booking i.e. WINDOW BOOKING then came a SMART APPLICATION i.e. BOOK MY SHOW now came an AUTOMATED CHATBOT.

V. COMPARTIVE STUDY

Sr No.	Paper Title	Author's Name	Problem	Solution	Future work
1.	Design of Chatbot with 3D Avatar, Voice Interface, and Facial Expression.	Antonius Angga P, Edwin Fachri W, Eleanita A, Suryadi, Dewi Agushinta R.	Distinguish the voice with too many unneeded noise.	To improve chatbot efficiency is to use interface other than text, as example voice interface. Voice interface is developed with a technology like speech recognition technology and text-to-speech	works is not perfect as the APIs used does not have a high level confidence for its output. this problem would be solved with a further development on that field.
2.	Chatbot Using A Knowledge in Database.	Bayu setiaji, Ferry Wahyu Wibowo.	The utilization of MySQL database in the chatbot is just restricted to store the learning.	All codes for requiring an example coordinating sent in programming dialect, so to make an administration in different dialects, the codes should be revised.	This application work is very simpler because the knowledge already programmed in advance.
3.	Smart Answering Chatbot based on OCR and Overgenerating Transformations and Ranking.	Ly Pichponreay, Chi-Hwan Choi, Jin-Hyuk Kim, Kyung-Hee Lee, Wan-Sup Cho.	Time consuming issue, information constraint problem, typing issue.	Making the framework consequently separate content and figuring out how to answer the inquiry without anyone else's input.	The future work is to improve the accurate, performance as well as the question and answer pair is not good enough due to format, alignment, font, punctuation of input document.

4.	Chatbot Evaluation and Database Expansion via Crowdsourcing.	Zhou Yu, Ziyu Xu, AlanWBlack, Alexander I. Rudnicky.	The issue of making a database of valuable reactions that makes utilization of a current corpus as a base yet in addition fuses a procedure that iteratively changes the database into a frame that is more qualified to the talk space.	To maintain a knowledge base of what the user said and use it for consistency checking as part of the selection process for the final response.	Assemble a pool of Tuckers that we can continue asking to interact with different versions of the chatbot, for evaluation.
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VI. PROBLEM STATEMENT

Problem being solved:

- 1) Easy to use: A user who does not know to operate the applications can chat with the bot about the ticket and the booking about to book it.
- 2) This application will help user to know the entire query related to movie.
- 3) There is chatbot for movie ticket booking in EUROPE "Odeon's Cinemas".
- 4) But there is no chatbot based on movie ticket booking in INDIA. There is application in INDIA "BookMyShow" which has booking of movie ticket but there is no chatbot in it to chat with user.
- 6) Bot informs the customer of nearby cinemas or where, and what time, their selected film is showing. Once a decision has been made, the customer is sent a link to a booking.

VII. PROPOSED SYSTEM

The proposed system is BookMyShow, was founded by Hemrajani, Parikshit c Dar and Rajesh Balpande. In 2007 they officially came up with BookMyShow website. The major purpose of this startup was to bring the concept online movie ticket in India. And soon as it expanded, it started offering online ticketing solution for the theaters, events, concerts and sports. Existing system first came a TRADITIONAL WAY of booking ticket i.e. 'WINDOW' booking. Then came a SMART APPLICATION to book ticket i.e. BOOK MY SHOW .Now we can also book a ticket by AUTOMATED WAY i.e. CHATBOT.

VIII. ALGORITHM

The general idea of working of proposed system algorithm is given as follow:

Step.1: Start.

Step.2: Enter movie name.

Step.3: Search query ="movie name";

Step.4: A string crawl 5 links

if links equals to ("bookmyshow")

or else (link []! = null)

then if class equals to list

Remove tag "nearby cinema";

if (list! =null)

break

else class equal to bread crumbs

then send the theatername//available movie in theatre

then get mname= movie name

Step.5: Check movie location, number of tickets & identify them from the user entered string using NLP. then ask for location//asked by user else number of ticket wants to book

Step.6: Send sms of booking to the user.

If message is equal to ("yes")//when system ask to book ticket

then user reply//yes or no

if ("yes") then sends your ticket has been booked successfully

else ("no") //want to exit or continue for movie

Step.7: Live support will add new question using AIML files.

if want to continue for movie

then again the process is revert

Step.8: If (session active) goto step 2; else goto step 8;

Step.9: Exit.

IX. MATHEMATICAL MODEL

Step 1. Give S a chance to be a framework that depicts the execution of the application. $S = \{.....\}$

Step 2. Recognize the modules as $M S = \{M... \}$ $M = \{E, R\}$ where, E = Predefined Questions. R = Undefined Questions.

(i)Identify contribution to E as $I_e = \{W, n\}$ where, W= Defined Questions with Answers. n=Number of approaches to ask a specific inquiry.

(ii)Identify the modules of R a $M_r = \{Tl, Lv\}$ where, Tl= Time required for exchange module. Lv=Live bolster module.

Step 3. Distinguish the Processes as $P S = \{M, P ... \}$ $P = \{Pg, Pf, Pc, P_disp\}$ where, Pg =Process of Getting Query. Pf = Process of Finding Query. Pc = Process of checking Query. P_disp =Process of showing Answer for question.

Step4. Recognize the yield as $O. S = \{M, P, O., \}$ $O = \{Or, Ow\}$ where, or= Output Defined Question (I) Context Aware Answering Ow= Output for Undefined Question.

Step5. Recognize the accomplishment as $Su. S = \{M, P, O, Su... \}$ where, Su= Success is when the accurate answer is generated based on question context.

Step 6. Identify the failure as $F. S = \{M, P, O, Su, F, \}$ where, F= When improper operations are done. The system can be described as $S = \{M, P, O, Su, \text{ and } F\}$. [7]

X. SYSTEM ARCHITECTURE

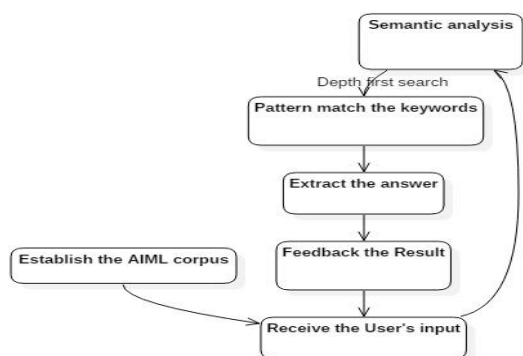


Fig.1: System Architecture

Description: There are 6 basic steps in the process of intelligently system architecture. There might be some changes to the phases as. The basic steps are:

- Establish the AIML corpus
- Receive the users input
- Semantic analysis
- Pattern match the keywords
- Extract the answer
- Feedback the result
- Execute it

XI. ADVANATGES

- 1) Bots are a lot easier to install than mobile apps and they can save users the much needed storage space on their smartphones.
- 2) Mobile app can be expensive to build, maintain, and display.
- 3) Messaging apps are already dominating engagement so no need to start your efforts from the scratch.
- 4) Bots interact with customers in natural conversational language.
- 5) Context Awareness
- 6) Free of cost.

XI .DESIGN DETAILS

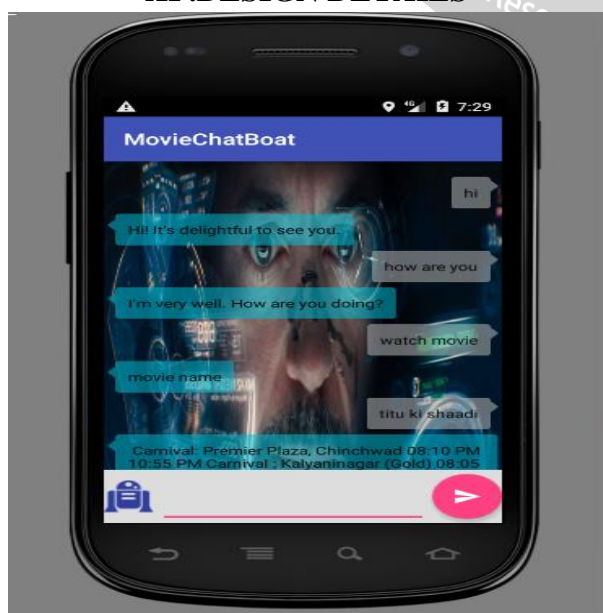


Fig.2: Output of Asked query

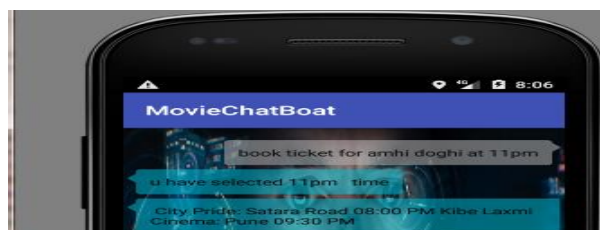


Fig.3: Result

XII. CONCLUSION

We have tried to implement paper Om Kumawar Prasad, Thakar Rohit, Shetty Akshay Bartukke “An Internet Relay Chat Bot Using AIML” Volume 4 Issue 10, October 2015 with combining another paper “Chatbot Using a Knowledge in Database”. The future scope is limitless. First there was traditional ticket booking i.e. WINDOW BOOKING then came a SMART APPLICATION i.e. BOOK MY SHOW now came an AUTOMATED WAY i.e. CHATBOT. This movie ticket booking chatbot gives exact time date and location of movie the user wants to watch.

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