e-ISSN: 2582-5208
International Research Journal of Modernization in Engineering Technology and Science
(Peer-Reviewed, Open Access, Fully Refereed International Journal)
Volume:04/Issue:04/April-2022 Impact Factor- 6.752 www.irjmets.com

CHAT BOT SONG RECOMMENDER SYSTEM

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ABSTRACT

Technology has a great impact on every part of lives, which also includes our day-to-day habits. In present scenario, fields like artificial intelligence and machine learning are on great boom. With the help of advancement in these fields, large number of people are interacting through the system via chat bots and voice assistants. Considering above factors, this project is aimed to implement the Machine Learning based Chat Bot Song Recommender System that includes chat bot to assist user and recommend songs using the Natural Language Processing. In this paper we will discuss methodology, algorithms and the flow of the system.

Keywords: Interactive Chat Bot, Interactive System User Interface, Recommender System, MYSQL Server, Natural Language Processing, Sentimental Analysis.

I. INTRODUCTION

Now-a-days, we all are living in the time where we knowthat nothing is certain. Same goes with our mind, at regular instances of time our mood, our choices and our priorities changes. Considering the constant changing behavior of human being we have developed our system. We have made our system considering that the humans experience frequently changes in their mood and somehow, at particular moment of time, frequently changing of mood would also result in change in mood of music of their choice. Hence, with the help of our system you can listen music according to your mood.

In addition, we have also provided the facility to user to chat with the chat bot after all texting makes conversation between chat bot and user more interactive and it will efficiently help in analyzing the current mood of the user and based on that chat bot will recommend songs.

Besides these, our system comprises of four modules. Initially for a new user we have provided a sign-up page. After completing sign-up , user can login to our system.

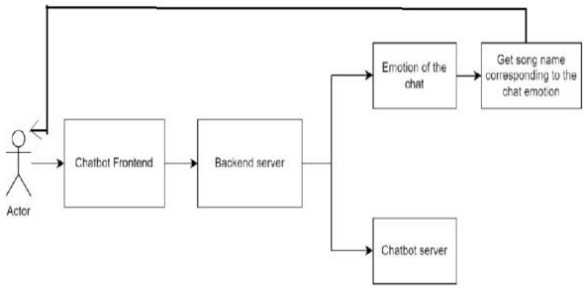
In addition to our system, we've also provided the password recovery facility to user, in case user forgot the password.

After chatting with the chat bot, current mood of the user is analyzed and list of songs is suggested to user, using the concept of NLP (Natural Language Processing). Based on the list of songs user can choose the song to be played based on his or her choice. We have used Python as our prime language because it supports an extensive set of open-source libraries which can be used by our system.

II. METHODOLOGY

The proposed system work develops a personalized system, where the user's current emotion is analyzed with the help of the chat bot. The chat bot identifies the user's sentiment by chat conversation with the user. Based on the input provided by the user, currentemotion or mood is analyzed by the chat bot and it will suggest song to the user. The objective of our application is to identify the mood expressed by the user and once the mood is identified, songs are played by the application. The application solves the basic needs of music listeners without troubling them as existing applications do.

Block Diagram:



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III. ALGORITHMS

- **Natural Language Processing:**

Natural language processing (NLP)

Sentiment analysis (or opinion mining) is a natural language processing (NLP) technique used to determine whether data is positive, negative or neutral. Sentiment analysis is often performed on textual data to help businesses monitor brand and product sentiment in customer feedback, and understand customer needs. Sentiment Analysis is a procedure used to determine if a chunk of text is positive, negative or neutral. In text analytics, natural language processing (NLP) and machine learning (ML) techniques are combined to assign sentiment scores to the topics, categories or entities within a phrase.

Mathematical Model:

Let S be the Whole system which consist S= {IP, Pro,OP}.

Where,

- IP is the input of the system.
- Pro is the procedure applied to thesystem to process the given input.
- OP is the output of the system.
- CH is chat bot
- CO is conversation between chat botand user
- NLP is Natural Language Processingbased on sentiment analysis

Output:

Based on the input provided by the user, current emotion or mood is analyzed by the chat bot and it will suggest song to user.

A. Input:

B.IP = {US, W}. Where,

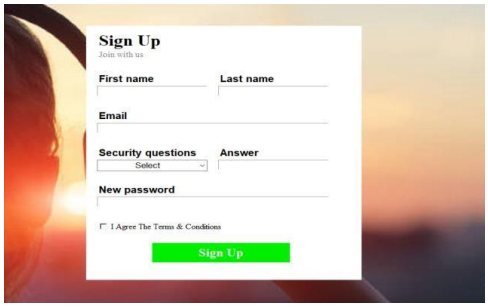
1. US is User.
2. W is Set of Text WordW={W1,W2,……Wn}

B. Process

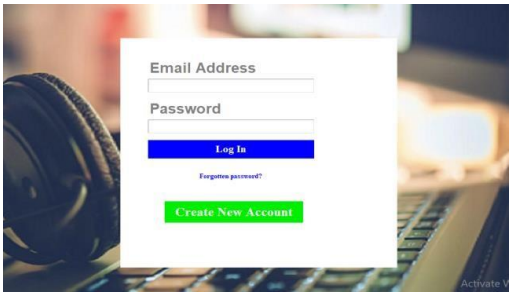
PRO= {CH, CO,NLP}

IV. FLOW OF PROJECT

1. Sign-up page



2. Login page



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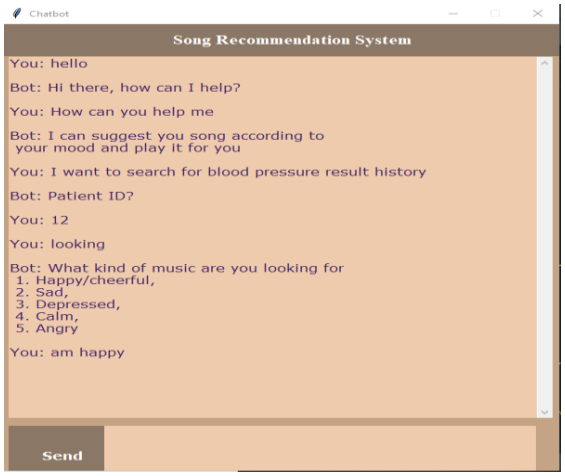
3. Chat bot GUI



4. Result

V. CONCLUSION

We have presented a survey and methodology for building the chat bot song recommender system. To perform this, we first identified various approaches for building a chat bot known to date. We then evaluated the considered algorithms which are useful in building of our system in terms of their ability to work on the recommendation process of the system. We also gathered all the requirements needed for building our system and studied the overall process involved in chat bot's working. Lastly we summarized the deployment requirements of our system. On the conclusion note our "Chat bot Song Recommender System" is used to facilitate the use by people to automate and give them better music player experience. The application solves the basic needs of music listeners without troubling them as existing applications do.

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