OTT Platform Analysis tool

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1. Introduction

1.1Overview

Recently it's observed that there's a striking increase in the usage of various OTT platforms, hence smart, accurate data analysis and recommendation models are the need of the hour. A chatbot will be built that helps the user to choose a film/show on Netflix faster, rather than spending hours finding a show/film and finding answers to generic queries. Thus making the recommendations more accurate and better for the user. The proposed system aims to recommend the best possible OTT platform for the users taking into consideration various parameters which influence the choice chosen by the user. Data Analysis will be done based on the genre, age group, past preferences, IMDB ratings and languages. The end user will be able to access and survey the data using a well organized website and make an informed decision. This will help the user to choose different languages(hindi, malu, kannada,etc) movies. According to the age group the model is able to recommend similar user types of movies.

1.2 Purpose

Users will be able to save a huge amount of time as detailed analysis and recommendations will be made available to choose from a plethora of options.

2.Literature Survey

2.1 Existing Problem

Due to the increasing popularity of OTT platforms, users face issues with choosing the best platform which would cater to their needs. A huge variety of options are available and hence it is extremely important to effectively analyse the

data to make an informed decision. Data analytics is a discipline focused on extracting insights from data which can be implemented to solve this problem at hand. Artificial Intelligence can also be used to build accurate models of recommendation systems.

2.2 Proposed Solution

The proposed solution consists of three key elements, namely the dashboard, recommendation system and chatbot. The datasets were filtered and cleaned using various tools.The dashboard is created using IBM services which provides useful insights on the ott platforms in India over the last 2 year. The website is created which has a recommendation model along with a chabot to solve general queries about ott platforms.

3. Theoretical Analysis

3.1 Block Diagram

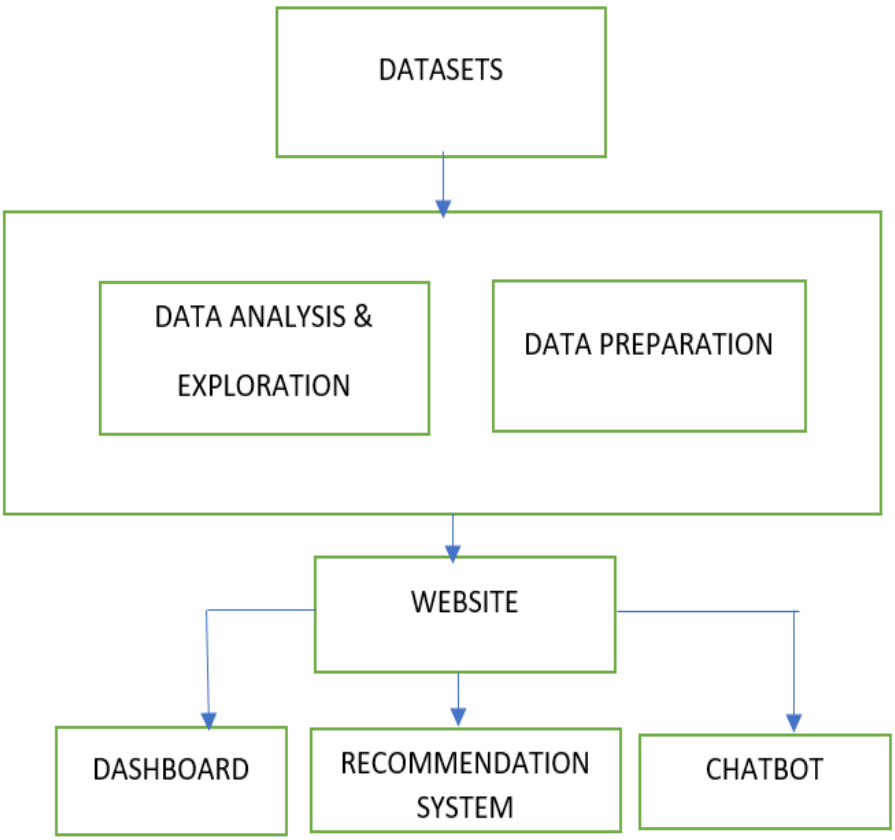


Fig2. Block Diagram of System

3.2 Hardware / Software Designing

Software and technologies used:

1. IBM Watson Studio
2. IBM Cloud
3. IBM Cognos Analytics
4. Figma, HTML, CSS, JavaScript, w3school for website layout and design
5. RNN and recommendation algorithm.

4. Experimental Investigations

1. The dashboard created is made using IBM Cognos Analytics, the trends in the usage of OTT platforms over the last 2 years is analysed to gain insights. It has been observed that there has been a significant increase in the utilization of OTT during the lockdown period. Netflix, amazon prime and disney hotstar is being widely used in India. The number of female viewers has rocketed by a considerable amount. Users prefer watching series over movies and originals. Users prefer to watch Hindi movies on Amazon prime, followed by Tamil and Malayalam. Disney Hotstar is used for watching animated movies, shows particularly by kids.
2. The chatbot created is made using IBM Watson Assistant, in chatbot we are recommending movies,subscription prices, information about OTT platforms like AmazonPrime, Disney+hotstar, Netflix, top 3 movies etc. chatbot analyzes the customer.
3. So as the data is provided by IBM in Kaggle. The data is in the form of a CSV file. So it requires some preprocessing before adding to the model. The data was opened in Jupiter by using pandas. After opening it the required data was taken and stored in a variable from all the data CSV files and created a new file. Then using the vectorizer from sklearn the shape of data is checked. Then using cosine_similarity the data is converted into a variable of 1 to 0. After the storage into x and y where x is movie_list and y for similarity. Using this process, the data model is created. The web app is created using streamlit and the model is accessed by it. The app was deployed using Heroku. Where it shows the recommendation of all the movies. On the website, the posters of the images are taken from TMDB.com.

5. Flowchart

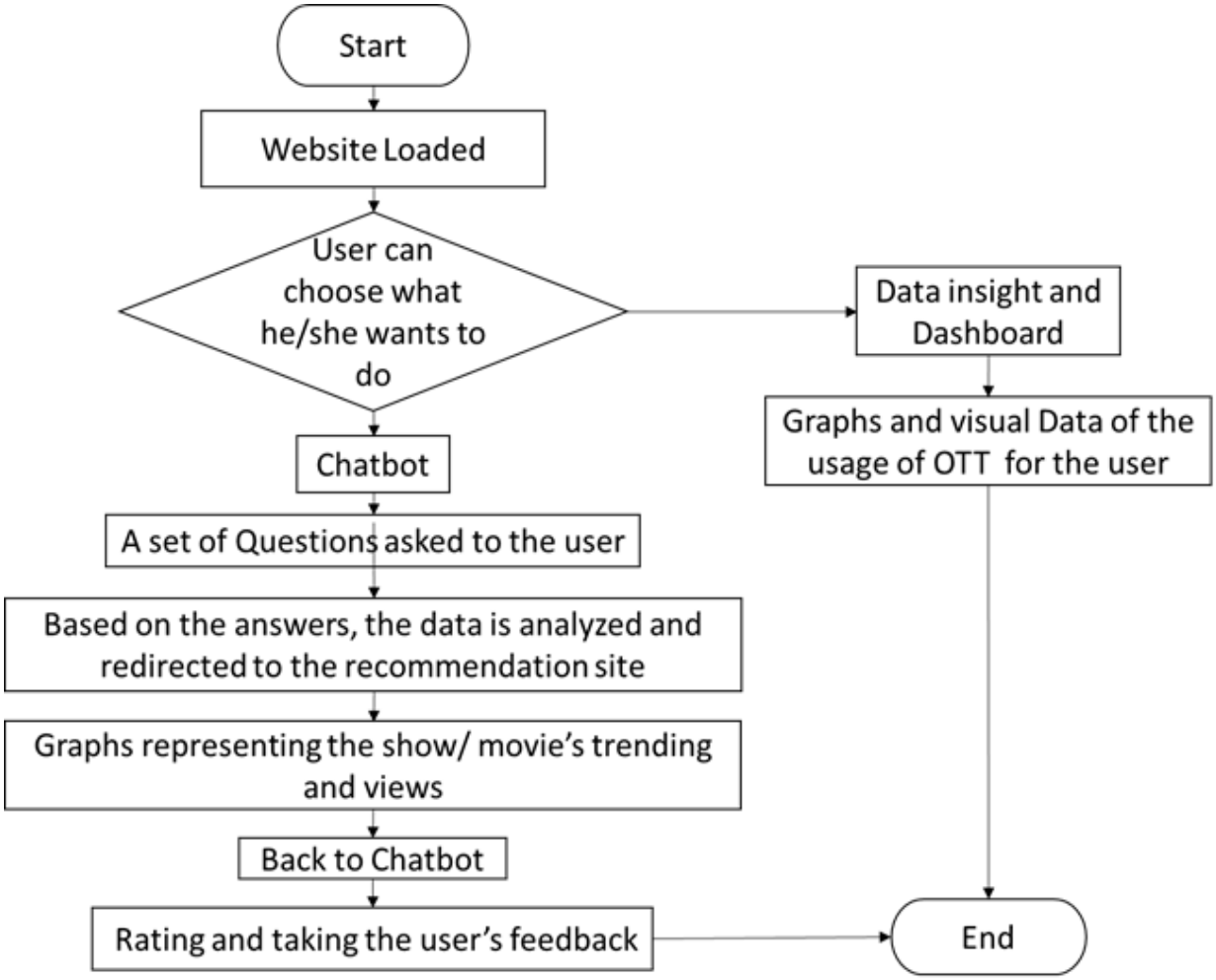
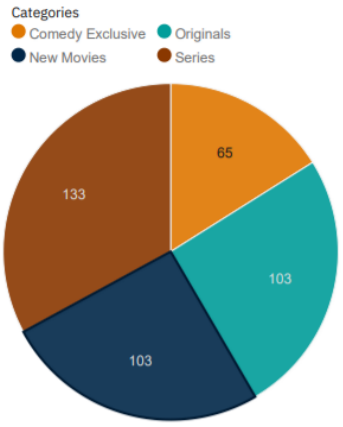


Fig1: Shows the workflow of the proposed solution

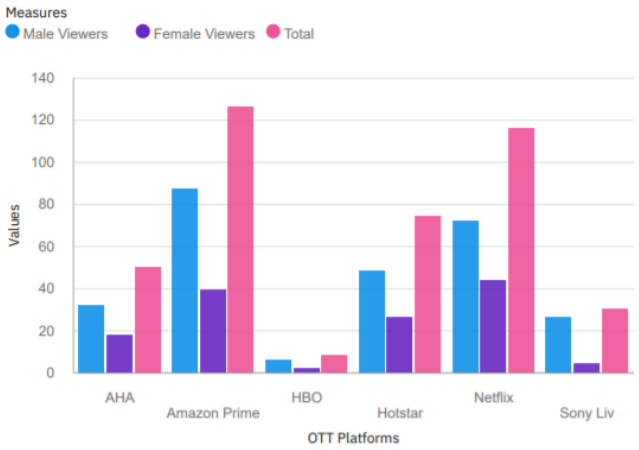
6.Result

Tab 1

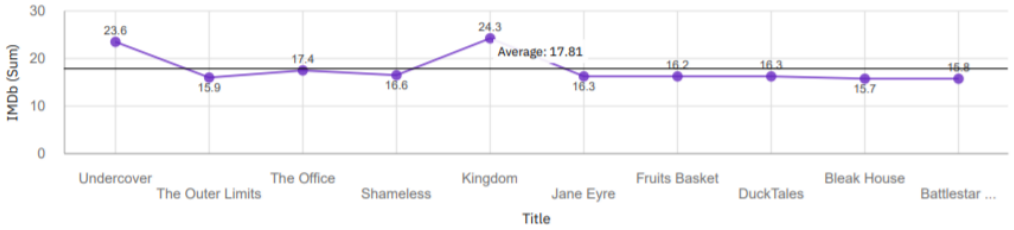
Total by Categories

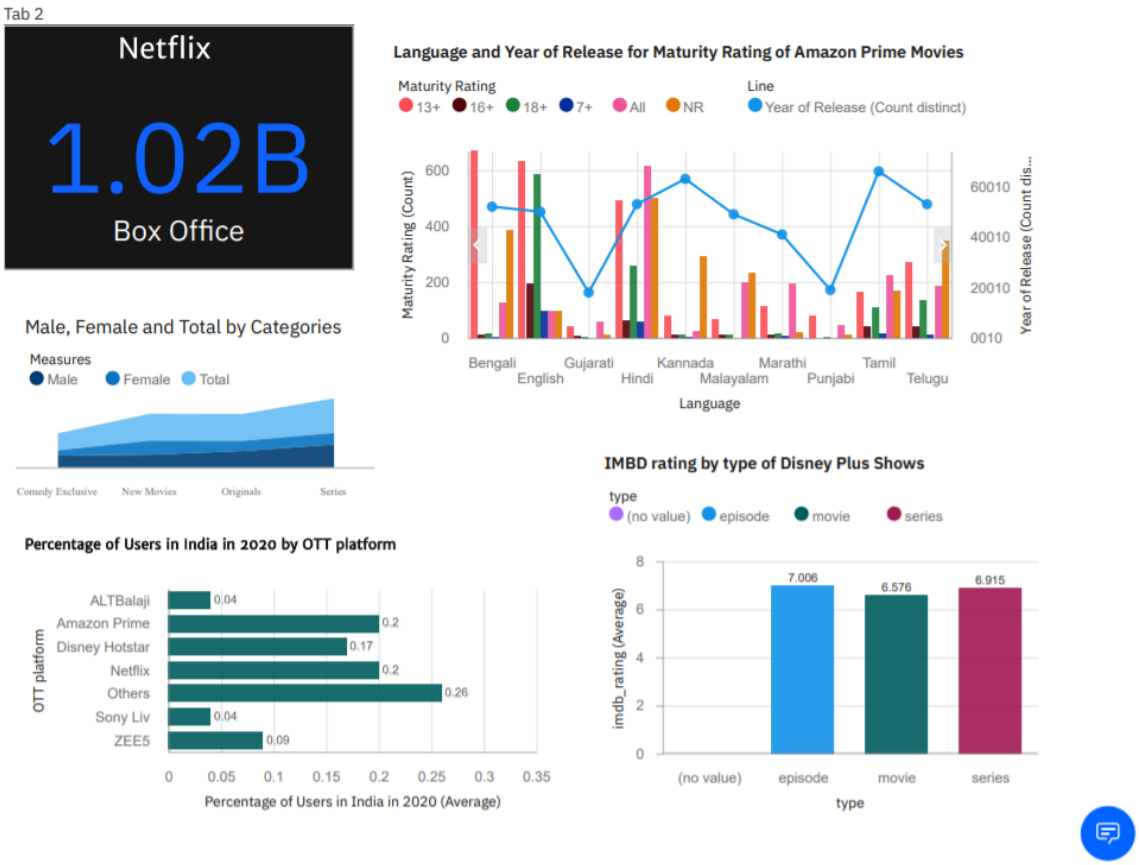


Male Viewers, Female Viewers and Total by OTT Platforms



IMDb by Title





Website Link : https://ottsimply-fire.w3spaces.com/

7. Advantages & Disadvantages

Advantages

1. The analysis and results will be unbiased as the data collection is done using crowdsourcing & universal datasets.
2. A Chatbot that is user friendly and easy to communicate with.
3. The model will recommend highly grossing content to the users which will promote the usage of OTT platforms and in turn increase its sales.
4. Viewers will have the liberty to choose from a plethora of online platforms and watch at their own convenience.

5. The producers and distributors can reach their target customers by referring to the detailed analysis and recommendations.

Disadvantages

1. The recommendation system is basic and cannot suggest according to the geospatial location of the user.
2. Detailed analysis is done on only the top ott platforms like netflix, amazon prime and disney hotstar.

8. Applications

1. Sentiment Analysis can be done using the data provided by users and their reviews.
2. The producers and distributors can reach their target customers by referring to the detailed analysis and recommendations.

9. Conclusion

The web based solution consists of a detailed dashboard containing the analysis of OTT platforms, a recommendation system based on reviews and using sklearn library, streamlit and python and an embedded chat bot which is made using Waston assistant for answering general queries. The system will prove to be of great assistance while searching for the best platform. Moreover, it will also help to zero down on tv shows & movies according to the users preferences.

10. Future Scope

The datasets will be analysed and visualization will be done to provide a holistic view of the OTT platforms used based on the demographics of a particular region, shows, reviews, genres etc. The data can be plotted and updated in real time using databases on the website. A chatbot will also be implemented for communication with the user and for providing highly accurate recommendations.

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12. Appendix