

## **A TV show suggestion framework In view of Viewer's rating**

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### **Abstract**

Due to increasing use of mobile like gadgets, people are not showing too much interest towards TV shows. In this paper, we are focusing on, creating viewer's interest in Television shows as well as providing statistic of viewer's rating to producer so that they will know the trendy topics and will prepare shows according to these trendy topics. Web mining will become very helpful to gather big data from internet. This will require mainly three modules: 1. Collection of data - This module will collect viewer's rating, sentiments and comments from different websites, And will convert ratings into percentage, also this module will analyze sentiments and comments, 2. Producing statistics - This module will produce statistical report of data obtained from conversion module based on age groups. Also it will provide statistics to

producer, 3. Suggestions of TV shows – This module will suggest TV shows to viewer that are having highest rating.

**Keywords:** big data, recommendation, statistics, web mining.

### **Introduction**

Day by day usage of internet has increased. This is affecting the number of viewers of Television shows. People are getting distracted from such shows. To get rid on this and catch viewers attention towards these TV shows, show suggestion framework will be quite helpful.

Big data of rating, sentiments over internet for a particular show will be analyzed e.g., in the age group of 7-12 more viewers are attracted towards the show 'Chota Bhim', most of the homemaker women are attracted towards traditional TV serials. Rating and sentiments will be converted into

percentage and analyzed. Statistics of data which is generated can be in any form eg., Graphs, mean, average etc. Considering age groups and highest percentage these TV shows will be suggested to a viewer. Clusters of shows will be formed according to age groups. Suggestions will be given to viewer on quarterly basis so that no viewer will get irritated and also he will get updates that which show is getting highest rating.

TV show viewers have multiple characteristics like geographic, demographic, socio-economic status etc [5]. The sentimental aspects (for example attitude, opinion, judgment, evaluation and choices towards the various shows of the television) of the viewers will be considered for these suggestions. For this sentimental computing will be used [4], through which we will get to know exact reaction of viewer towards the show. Also we are working on analyzing comments for particular show. From this we will understand exactly what meaning does these comments depict are briefed and stored into database. Statistical report of all these data (rating, sentimental aspects, comments) will be stored in NoSQL databases. By providing this report to producers they will come to know the trendy topics and where their shows are slacking behind. So according to this they will make changes in ongoing shows and attract multiple viewers towards these shows thus increase in TRP of the show.

### Literature Survey

TV show suggestion is, one of the applications of recommendation systems, very useful in different fields since many years.

In the paper [1], they have described analysis program based on the television channel ratings, television program ratings, program type and program broadcast time. Recommendation System uses Big Data for analysis. Drawback of this system is that they have not considered the viewer's sentimental analysis of the television program also they have not analyzed comments. By sentimental analysis and comment analysis we will get correct detail about viewer's fascination towards an specific show.

The massive data is collected form internet. These data are in

the multiple forms. Web mining techniques will be necessary in order to determine attractive patterns from web [2].

It is important to suggest accurate show to viewer because accuracy directly impacts discernment for the recommender [3].

Previous researches related to this don't focus on sentimental analysis. Increased social media use is leading us to sentimental computing [4].

### Proposed System

This system will mainly focus on three modules

1. Collection of data
2. Producing Statistics
3. Suggestions of TV shows

#### A. Main Algorithm

Step 1: Scan ratings, sentiments and comments from different resources.

Step 2: Convert ratings and sentiments into percentage

Step 3: Analyze comments

Step 3: Produce statistics

Step 4: Send statistics to producer

Step 5: Suggest shows to viewer based on statistics

#### B. Collection of data

This module will gather rating, sentiments and comments for particular show over the internet. This data can be in different forms eg., text, image.

#### Algorithm

```
//specify list of URL's to scan for rating, sentiments and comments for shows.
```

```
{  
  While not empty(URL_list)  
  {  
    Visit URL  
    Scan rating for particular show  
    Scan sentiment for the same show  
    Scan comments for the same show
```

```

    Store this data into database
    Convert rating into per
    Per=previous_per + curr_per
    Convert sentiments into percentage
    Sent_Per=previous_sent_per + curr_sent_per
    Tot_per= Per+Sent_Per
    Mark URL as visited
}
Analyze comments
Store brief data of overall analyzed comments
}
    
```

**C. Producing Statistics**

This module will produce statistics of rating, sentiments and analyzed comments. Statistics is produced considering age groups.

**Algorithm**

- Step 1: Take details of each show.
- Step 2: Form cluster of shows according to age groups.
- Step 3: Generate report i.e. Graphs, mean, average, charts etc.
- Step 4: Send statistics report to producers.

**D. Suggestions of TV shows**

This module will suggest shows to viewers according to age groups. Eg., The show “Ninja Hatori” consists of highest percentage and has got positive comments in the age group of 7 years -12 years. It will be suggested at first position to user.

**Algorithm**

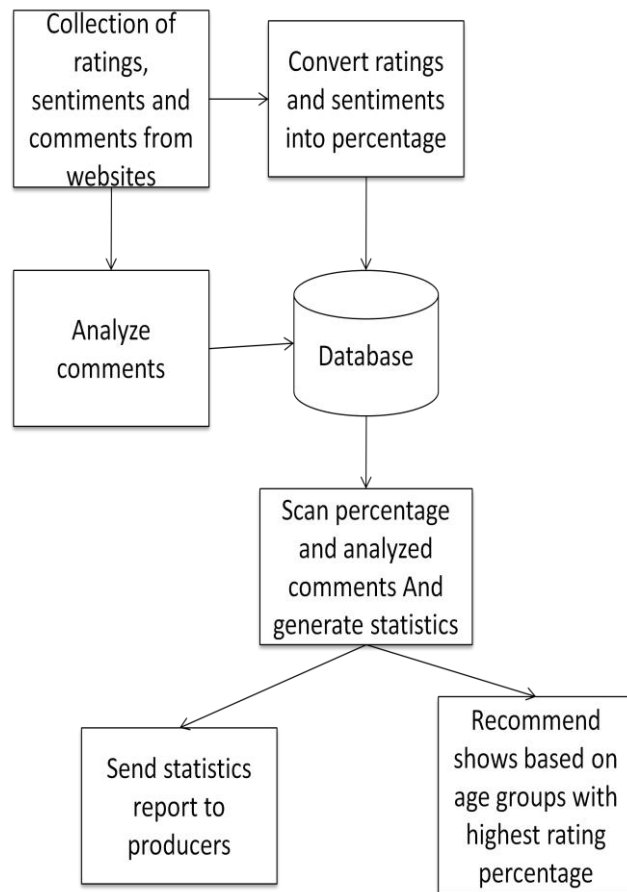
- Step 1: Scan report generated in previous module.
- Step 2: Scan the show in each cluster having highest percentage.
- Step 3: Suggest these shows to viewers.

**E. Architecture**

In this system, firstly the collection of ratings from different websites is done. Also comments of the viewers are considered and the sentimental analysis is also included, all

these are analyzed to suggest particular TV shows. All the data is stored into MongoDB database for further processing. Based on the stored data statistics are finalized. According to the statistics the shows are suggested to the viewers.

The Fig 1 shows architecture based on modules.



**Fig 1- Architecture based on modules**

**Conclusion**

The proposed system analyzes the ratings of programs as well as the channels. It also evaluates sentimental interests of the viewer and comments. This system uses web mining which helps in automating the extraction of data from various sources. It may be supportive of the producers about different shows to procure feedback around their television demonstrates What's more should realize those trendy topics. Clinched alongside future extension we will attempt to analyze viewer's reaction and comments on social media. And suggest shows on social media sites.

## References

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