

# MOVIE RECOMMENDATION SYSTEM BASED ON TWITTER SENTIMENT DATA

Mr.G.Prabhakar  
Asst.Professor

Department of Information Technology  
Malla Reddy Engineering College for Women  
(UGC-Autonomous)  
Maisammaguda,Hyd-500100,Telangana,India.

N. Deekshitha Reddy  
Student

Department of Information Technology  
Malla Reddy Engineering College for Women  
(UGC-Autonomous)  
Maisammaguda,Hyd-500100,Telangana,India.

Ritika Kolluri  
Student

Department of Information Technology  
Malla Reddy Engineering College for Women  
(UGC-Autonomous)  
Maisammaguda,Hyd-500100,Telangana,India.

N. Akshaya Reddy  
Student

Department of Information Technology  
Malla Reddy Engineering College for Women  
(UGC-Autonomous)  
Maisammaguda,Hyd-500100,Telangana,India.

*Abstract*— The use of recommendation systems (RSs) in e-commerce and digital media has attracted a great deal of interest. Collaborative filtering (CF) and content-based filtering (CBF) are examples of traditional approaches in RSs. These systems have some drawbacks, such as the requirement of prior user history and habits for executing the task of recommendation. This article suggests a hybrid RS for movies that makes use of the finest ideas from CF and CBF as well as sentiment analysis of tweets from microblogging websites in order to lessen the impact of such limitations. The goal of using movie tweets is to comprehend current trends, popular opinion, and user reaction to the film. On the public database, experiments have produced encouraging outcomes.

## I. INTRODUCTION

Collaborative filtering (CF) and content-based filtering (CBF) are examples of traditional approaches in RSs. These systems have some drawbacks, such as the requirement of prior user history and habits for executing the task of recommendation.

The issue of too much information being available affects users frequently. Recommendation systems (RSs) are used to assist consumers in navigating the explosion of information. RS is mostly employed in e-commerce sites like Amazon, Flipkart, and eBay as well as digital entertainment platforms like Netflix, Prime Video, and IMDB. This article focuses on RS for movies, a significant source of entertainment and leisure in our lives. Web-based

portals are what users rely on for movie recommendations. The genres of movies, such as

comedy, suspense, animation, and action, can be used to distinguish them. The metadata for the movies, such as the release year, language, director, or actors, may also be used to categorise them. The majority of online video streaming services leverage the customer's historical data, such as past viewing or rating history, to deliver a tailored user experience.

## II. RELATED WORK

### 1. Twitter-based user modeling for news :

AUTHORS: F. Abei, Q. Gao, G. J. Houben, and K. Tao

How might Twitter's microblogging features be used to model and tailor users' experiences? The framework for user modelling on Twitter, which improves the semantics of Twitter messages and identifies the themes and entities addressed in tweets, is introduced in this paper as part of our investigation into this question.

### 2. Toward the next generation of recommender systems: A survey of the state- of-the-art and possible extensions.

AUTHORS: G. Adomavicius and A. Tuzhilin.

The current generation of recommendation methods, which are typically divided into the following three primary categories: content-based, collaborative, and hybrid recommendation approaches, are described in this

paper along with an overview of the topic of recommender systems.

### III. EXISTING SYSTEM

Over the years, many RSs have been created. To recommend the most popular goods, these systems employ a variety of strategies, including sentiment analysis, hybrid, CBF, and CF. The following is a discussion of these strategies. A. Content-Based, Collaborative, and Hybrid Filtering The literature has suggested a number of RS ways for recommending items. The original application of CF was presented in which a search system based on document contents and feedback gathered from other users was proposed. Yang extrapolated implicit ratings based on how many pages consumers read. Users are believed to like the documents more as they read more pages. This idea can assist CF patients avoid the chilly start issue. The challenge of RS optimization is poorly posed. Numerous optimization techniques, including genetic algorithms, particle swarm optimization, grey wolf optimization, and artificial bee colonies, have been proposed by researchers. Based on fuzzy c- mean clustering and the grey wolf optimizer, Katarya and Verma created the collaborative movie RS. Both methods were used to predict a better RS for the Movie Lens data set. In order to alleviate the scalability and cold start complications, they updated the previous framework by introducing an artificial bee colony and k- mean cluster (ABC-KM) architecture for a collaborative movie RS.

### DISADVANTAGES:

1. Current users get access to user-generated content in addition to receiving information based on their social connections.
2. Prior user behavior and history are essential for accomplishing the task of recommendation.

### IV. PROPOSED SYSTEM

Fig. 1 depicts the suggested sentiment-based RS. We go over a few of the planned RS's components in this part. Data Set Description, Part A The suggested system requires two different kinds of databases. Two examples include user tweets from Twitter and a user-rated movie library with ratings for pertinent films.

**Public Databases:** A variety of well-liked public databases are readily available and are frequently utilised to provide movie and other entertainment-related recommendations. The tweets about movies were retrieved from Twitter and compared to the movies that were present in the database in order to incorporate sentiment analysis into the suggested framework.

**Movie Tweetings Database Modification:** To implement the RS in the proposed work, the Movie Tweetings database is altered. The Movie Tweetings database includes films that were released between 1894 and 2017.

### ADVANTAGES:

- By using movie tweets, one can learn about current events, popular culture, and audience reactions.
- On the public database, experiments have produced encouraging outcomes.

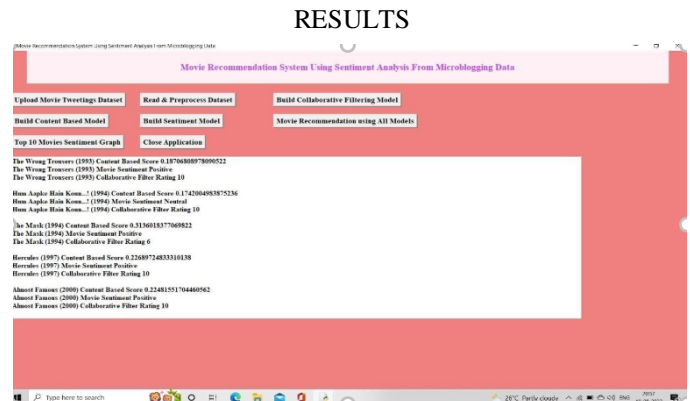


Fig. 1: Hybrid Model

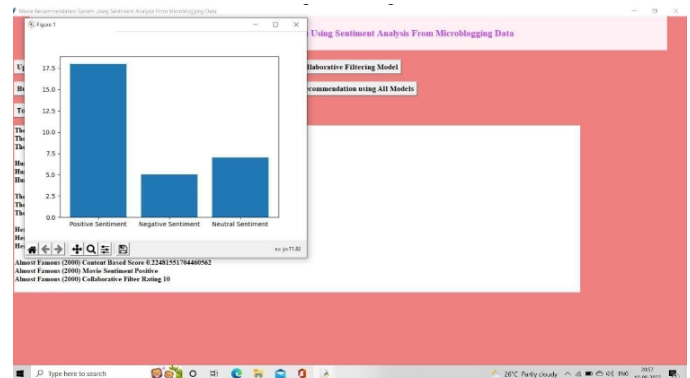


Fig.2: Sentiment Graph

### CONCLUSION AND FUTUREWORK

In the present era, where a vast amount of data is easily accessible, RSs are a significant medium of information filtering systems. In this paper, we present a movie recommendation system (RS) that recommends movies based on sentiment analysis data from Twitter, movie information, and a social network. Sentiment analysis reveals information on the reactions of the viewers to a specific film and the perceived use of this data. The recommendations were enhanced by the suggested system's use of weighted score fusion. Based on our trials, sentiment similarity, hybrid, and the suggested model's average precision in the Top-5 and Top-10 are 0.54 and 1.04, 1.86 and 3.31, and 2.54 and 4.97,

respectively. We discovered that the suggested model makes recommendations more accurately than the other models. To further enhance the RS, we intend to take into account more data regarding the user's emotional tone from various social media platforms and non-English languages in the future.

#### REFERENCES

1. F. Abel, Q. Gao, G.-J. Houben, and K. Tao, "Analyzing user modeling on Twitter for personalized news recommendations," in Proc. 19th Int. Conf.

Modeling, Adaption, Pers. (UMAP). Berlin, Germany: Springer Verlag, 2011, pp. 1–12.

2. F. Abel, Q. Gao, G.-J. Houben, and K. Tao, "Twitter-based user modeling for news recommendations," in Proc. Int. Joint Conf. Artif. Intell., vol. 13, 2013, pp. 2962–2966.

3. G. Adomavicius and A. Tuzhilin, "Toward the next generation of recommender systems: A survey of the state-of-the-art and possible extensions," IEEE Trans. Knowl. Data Eng., vol. 17, no. 6, pp. 734–749, Jun. 2005.