Movie Recommendation System Using Sentiment Analysis from Micro blogging Data

ABSTRACT

Recommendation systems (RSs) have garnered immense interest for applications in e-commerce and digital media. Traditional approaches in RSs include such as collaborative filtering (CF) and content-based filtering (CBF) through these approaches that have certain limitations, such as the necessity of prior user history and habits for performing the task of recommendation. To minimize the effect of such limitation, this article proposes a hybrid RS for the movies that leverage the best of concepts used from CF and CBF along with sentiment analysis of tweets from micro blogging sites. The purpose to use movie tweets is to understand the current trends, public sentiment, and user response of the movie. Experiments conducted on the public database have yielded promising results.

**EXISTING SYSTEM**

* Yang *et al.* [59] inferred implicit ratings from thenumber of pages the users read. The more pages read by the users, the more they are assumed to like the documents. This concept is helpful to overcome the cold start problem in CF. Optimizing the RS is an ill-posed problem. Researchers have proposed several optimization algorithms, such as gray wolf optimization [26], artificial bee colony [21], particle swarm optimization [53], and genetic algorithms [6].
* Katarya *et al.* and Verma [26] developed a collaborative movie RS based on gray wolf optimizer and fuzzy *c*-mean clustering techniques. Both techniques are applied to the Movielens data set and predicted a better RS. They improved the existing framework in [24] proposing an artificial bee colony and *k*-mean cluster (ABC-KM) framework for a collaborative movie RS to reduce the scalability and cold start complication. The combination of the hybrid cluster and optimization technique showed better accuracy in movie prediction compared with movie prediction by the existing frameworks. Dong *et al.* [11] proposed feature relearning with data augmentation for the Hulu Content-based Video Relevance Prediction Challenge. The result showed better improvement in TV shows and movie track in recall@100.
* Most approaches suffer from the sparsity problem in Social-aware Movie Recommendation systems (SMRs). Zhao *et al.* [63] developed a framework called SMR-multimodal network representation learning (MNRL) for movie recommendation to address this issue effectively. The result achieves better performance on a large-scale data set collected from the Chinese social-aware movie recommender site (Douban).
* **Disadvantages**
* The existing system the system doesn’t detect rumors due to lack of credibility of Twitter-based movie event detection.
* The system doesn’t have sentiment classification with 2 stage training sets.

**PROPOSED SYSTEM**

To overcome this limitation, various social media platforms, such as Quora, Facebook, Instagram, and Twitter, people use to share their daily state of mind over the Internet. Twitter [1], [2], [16] is one of the most popular social media platform founded in 2006 where users can express their thoughts in limited characters. The Unique Selling Proposition of Twitter is that the existing users not only receive information according to their social links but also gain access to other user-generated information. The source of information on Twitter is called tweets. Tweets keep users updated about their favorite topics, people, and movies in limited characters.

**Advantages**

* A hybrid RS is proposed by combining CBF and CF.
* Sentiment analysis is used to boost up this RS.

**SYSTEM REQUIREMENTS**

➢ **H/W System Configuration:-**

➢ Processor - Pentium –IV

➢ RAM - 4 GB (min)

➢ Hard Disk - 20 GB

➢ Key Board - Standard Windows Keyboard

➢ Mouse - Two or Three Button Mouse

➢ Monitor - SVGA

**Software Requirements:**

* Operating System - Windows XP
* Coding Language - Java/J2EE(JSP,Servlet)
* Front End - J2EE
* Back End - MySQL