ISSN XXXX XXXX © 2017 IJESC

Research Article Volume 7 Issue No.12

A Study on Travel Recommendation System

Angulakshmi[1], Rathi.R[2], Dr.Sudha Senthilkumar[3], Dr.K.Brindha[4], Rajat Tandon[5]
Assistant Professor (Senior)[1, 2], Associate Professor[3], Assistant Professor(Selection Grade)[4], B.Tech Student[5]
School of Information Technology and Engineering
VIT University, Vellore, Tamilnadu, India

Abstract:
Recommendation is a part of information filtering system which is used to predict the rating or preferences of the user in general. Considering the travel recommendation system, it predicts the user preferences or rating of a particular tourist place. Using that predicted value; a user can understand that the particular place is worth seeing. To make this prediction, we use this information filtering systems. Many filtering techniques exist, but we look into content based filtering, collaborative filtering, and Hybrid systems. This paper makes survey on different filtering systems used for recommendation systems. We also discuss about the factors for increasing the performance of recommendation system which paves the way for further research.

I. INTRODUCTION

Much research work has been carried out in this recommendation system. User wishes to visit many places but with the lack of a Recommendation system about the user rating is unavailable, they fails to visit some of the places.Recommandation system is useful for many real time applications like Facebook, twitter, purchasing a products, for staying in a hotels. To predict whether a place is really worthy to visit can be predict is the recommendation system which can be done using Information filtering system like collaborative filtering technique, content filtering technique and also the hybrid systems which comes from combining the both. To work with this recommendation system, the past dataset about a particular place shold be collected from a standard data repository like UCI repository, KDD cup etc. With the available dataset, Information filtering techniques is used along with some machine learning algorithms like [5][4] Neural networks, Decision tree, Bayesian classification, Genetic algorithms can be applied so that better prediction accuracy can be acheived.This happens with supervised learning. Whenever we go for unsupervised learning technique, then [3] clustering algorithms is efficiently applied to the dataset. Many researchers have done their towards this area to achieve good results.[1]The authors proposed a cocktail approach for travel recommendation system based on TAST model.[2] In this paper, they proposed a travel recommendation system based on Adaboost algorithm with Bayesian classification algorithm .[5][4][In this book many machine learning algorithms for classification and prediction is discussed.[3] Clustering algorithms is used to carry out this travel recommendation system. [7] They made a survey on many travel recommendation models. [4] The author discussed about many soft computing approaches and these approaches can be effectively applied on recommendation system. [6] An efficient K-Means clustering algorithm is used along with Filtering technique for image processing. [8] An efficient data handling techniques is being reviewed by the author

II. INFORMATION FILTERING APPROACHES

2.1 COLLABORATIVE FILTERING

Mainly based on information of user's behaviour and interest and prediction. Mainly it does not depend on machine learning and complex information can be recommended. Much information is collected from other users. This can be combined with soft computing techniques forachieving accuracy [9].

2.2CONTENT-BASED FILTERING

Another common approach when designing recommender systems is Content-based filtering. Content-based filtering methods are based on item and a profile of the user's preference description [9]. This helps to indicate the type of item the user likes. The previous recommendation of user is explained to find the best recommendation. This helps to perform information retrieval and information research. Item presentation algorithm is one such algorithm used mainly in recommendation system. This deal with history of information system and user interaction with system. Many machine learning system like as Bayesian, Classifiers, cluster analysis, decision trees, and artificial neural networks are used. Machine learning techniques can be hybridized with roughset; fuzzy set logics also to deal with uncertainties present [10]. The many issue able learn from user profile their recommendations. This can be combined with soft computing techniques for achieving accuracy.

III. HYBRID RECOMMENDER SYSTEMS

Many machine learning techniques as well as optimization algorithms can also be applied along with this content and collaborativeinformation filtering technique for information filtering. The hybridisation of collaborative and Hybrid approaches are very effective in several ways. The recommendation can be good with hybrid system. This includes multiple techniques like Collaborative: Recommendation is based on different user opinion. [9] Content-based: The recommendations based on classification techniques and generate classifier. Demographic: Demographic profile of the user is used for providing recommendation. Knowledge-based: User preferences and interfaces are used for providing recommendation.

IV. FACTOR FOR IMPROVING PERFORMANCE OF THE SYSTEM

- Robustness – The model developed should work in all types of platforms

- Scalability- Enormous volume of data or the heterogeneous data should be supported by the recommendation system what the researcher is developing [4].
- Diversity – user get satisfied with different variety of inputs for recommendation system
- Speed- When the data increases, the recommendation system should support it with increasing speed. The user will be satisfied if the speed of the recommendation system is reasonable.
- Recommender persistence – The user will be happy if the item is reshow and re rated
- Security: user information has to be secured and more privacy should be provided. Because user provides very sensitive information. This information has not to be revealed. Trust is very important for recommendation system. It creates trust by generating more explanation about the recommendations are carried out.[9]
- Serendipity – This deals about surprising recomm endation. User will be happy with surprising recommendation. Even though the recommendation is known to user, user gets satisfied with surprising recommendation.

V. CONCLUSION.

A study based on recommendation system has been specified in the above paper.The paper mainly deals with travel based recommendation system. Here we mainly focussed on information filtering Techniques. Some future research direction has also been discussed.

VI. REFERENCES

[1].Qi Liu, Enhong Chen, Senior Member, IEEE, HuiXiong, Senior Member, IEEE,YongGe, Zhongmou Li, and Xiang Wu,"A cocktail approach for travel recommendation".2014

[2].Subramaniyaswamy V, Vijayakumar V, LogeshR andIndragandhi V(2015),"Intelligent travel recommendation system by mining attributes from community contributed photos".

[3]. H.Frigui, "Simultaneous clustering and feature discri mination with applications," in advances in Fuzzy clustering and feature discrimination with applications. *New York: Wiley*, *2*007, vpp.285-312.

[4].Rathi.R "Hybridization of soft computing framework-A survey" *International journal of pharmacy and technnology*, 2016.

[5]. Hn,Jiawli, MichelineKamber and JianPeir "*Data Mining" Concepts and technique"* Morgan Kaufmann. 2006

[6]. T.Kanugo and D.M.Mount "An Efficient K-Means Clustering Algorithm: Analysis and Implementation", Pattern Analysis and Machine Intelligence, *Transaction on Pattern Analysis and Machine Intelligence*. vol 24,no.7, 2007.

[7]. Recommendation system application development -A survey "*Decison support system*", 2015

[8].Angulakshmi. M "Big data Analytics-A review" *Intern ational Journal of pharmacy and technology*, 2016

[9]. https://en.wikipedia.org/wiki/Recommender_system

[10]. Rathi, R., Visvanthan, P., Kanchana, R., Anitha. A., (2013). Rule extraction using rough set approach. *International journal of applied engineering research* 8 (14), 1661-1667.