Personalized News Recommendation System

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ABSTRACT

With the development of network information technology, a lots of news comes into the view of Internet users. We have entered the "information overload" era. So how to find useful information becomes more important. Personalized news recommendation is a technology to find the news that users want to get urgently. It is based on browsing history of many users. Through analysis of their interests, we can realize that the personalized news recommendation for different user. In our system, we propose an improved association rules. This method associates with the collaborative filtering algorithm to form the hybrid recommendation algorithm. Through using this new algorithms, we can generate recommendation lists and realize the Personalized News Recommendation.

Keyword: - *Personalized Recommendation Algorithm, News Recommendation, Association Rules, Hybrid Collaborative Filtering Algorithm.*

1. INTRODUCTION

People are faced with serious and urgent problems which is called information overload. Through the analysis of three levels web links about news statistics for People Daily online in one day, they find more than 4,000 pieces of news are browsed. This is the number of news in People Daily online. Now there are many unconventional news, such as Tencent, Sina, Shoo, Net ease, the global times and so on. The number of news browsed on these websites over a day will reach more than 10,000. Facing so much news, most people prefer to receive headlines passively instead of taking beginning in paying attention to them. Under this condition, personalized news recommendation appears. It based on the browsing history of poly users. By the analysis of their interests, we can analyze the personalized news recommendation for different users. So it can help users to finds the news in which they are interested it save much more time. With the fast development of Internet in recent years, the theory and algorithm about recommendation become better such as collaborative filtering algorithm content-based algorithm, association rules, hybrid algorithm and so on. Introductory studies have found that there is some similarity between the news one person browsed, and more users are likely to have a same interest. In addition, the interests of users will also change time by time, which brings new challenges and opportunities to the recommender. Hence, we can discover user's browsing variation law and patterns of news through analyzing user's browsing behavior with time tagged, and design an accurate recommendation system to forecast the news that users would be browse in the future.

2. LITERATURE SURVEY

In practice, many commercial recommender systems are based on huge datasets. As a result, the user-item matrix used for collaborative filtering could be extremely large, which brings about the challenges in the performances of the recommendation. A collaborative filtering system does not unavoidably succeed in automatically matching content to one's choice. Unless the platform achieves unusually good independence and variety of opinions, one point of view will always and highways in the country. In the dominate another in a particular community. As in the personalized recommendation scenario, the introduction of new users can cause the cold start problems, as there will be insufficient data on these new entries for the collaborative filtering to work rigorously. In order to make correct recommendations for a new users, the system must first learn the user's

preferences by analyzing past rating activities. The collaborative filtering system require a massive number of users to rate a new item before that item can be recommended.

3. EXISTING SYSTEM

In Existing system the system was not provide the facility of histories of recommended news to user. Also in the existing system was not provided the facility like share, like etc. All this drawback of existing system are overcome in proposed system.

4. PROPOSED SYSTEM

In our proposed system, We developed model for Personalized News Recommendation System has been implemented in the Android platform Operating System .This application helps the user to view the news as per his/her interests i.e. they are recommended news. In this application the smart phone user first login to use this application if it is a new user then he/she have to create new account, after creation of account they got user ID and they also have to enter password. The password will be given by user .After that user have to insert his basic information such as Name address, Mobile number, email id, etc.

After inserting this all information user have to give interest. There, the news categories into the sections such as politics, Entertainment, Business, Govt. Jobs, Sports, etc. We are providing checkboxes there. Users have to tic to those options in which news they are interested. Then News are seen as per the interest given by the user, i.e. in which topics user is interested those news are display's first. After that the rank wise news are displayed.

In this we are providing one new option i.e. LIKE option news which are liked by the user they are displayed firstly when user open the application after logout.in this way we are providing recommendation of news. In Existing system the system was not provide the histories of recommended news to user but In Propose system they will provide the histories of recommended news as per user interest.
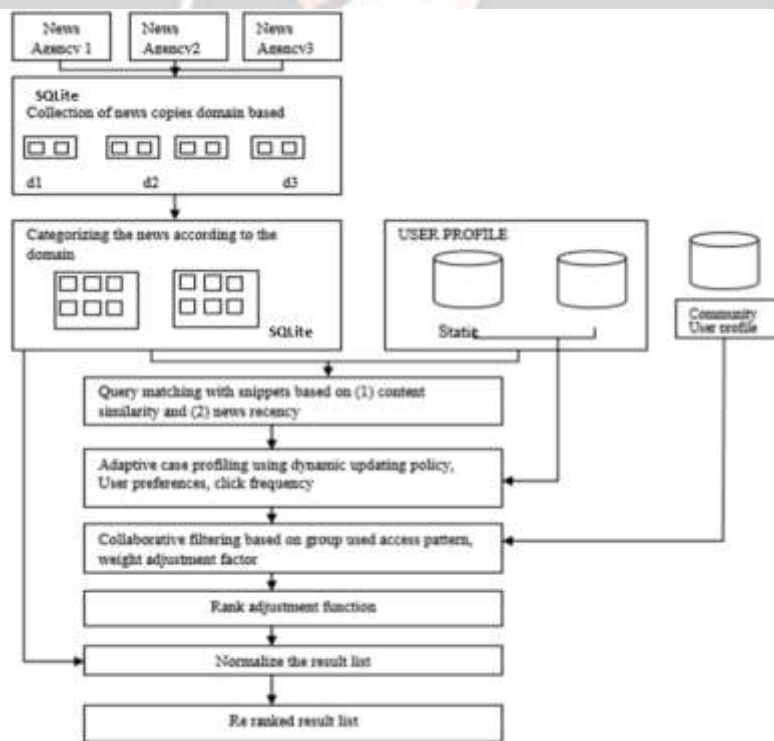
5. SYSTEM ARCHITECTURE

Fig -1: System Architecture Diagram

The different components in the architecture are:-

1. User: This is the user who installs the application on their Android device. The user provides various inputs like user name, and password, etc. and selects news options on the application.

2. Front End: This is the part of the application which is visible to the user. A screen presents to the user is usually an Activity, CheckBox, etc. They contain various elements like text box or buttons to take inputs from and provide outputs to the user.

3. Services: This is the component that is typically used to perform long background tasks that do not have a user interface.

4. SQLite: Android platform is provide libraries for SQLite database. A SQLite database is a relational database which is local to an Android device. It does not require configuration and is available to use for an app developer. For example, SQLite is used in the application to store various information about a user, his last recommended news options or in the case there is no internet connectivity SQLite database display the message that "there is no internet connection" until the internet connection is back up.

5. Database: This is the MySQL database on the server. It stores information's of that permanent user, recommended history etc.

4. SYSTEM REQUIREMENT SPECIFICATION

4.1 SOFTWARE REQUIREMENTS

*   Operating System: Windows 7 or higher.
*   Coding Language: Java, XML.
*   IDE: Android Studio.
*   Database: SQLite.
*   Android 4.1 or higher.

4.2 HARDWARE REQUIREMENTS

*   Processor: i3 or higher.
*   Clock Speed: 2.4 GHz.
*   RAM Size: 2GB.
*   Hard Disk Capacity: 40 GB.
*   Floppy Drive: 1.44MB.

5. TECHNICAL SPECIFICATIONS

5.1 ADVANTAGES

*   Effective handling of Big Data.
*   Time Saving Process

5.2 APPLICATIONS

*   Google news recommender system.
*   Job Search Recruiting.
*   TV Program.

6. CONCLUSIONS

In this paper, we mainly use the hybrid recommendation algorithm which combined with collaborative filtering algorithm and improved association rules to get the personalized news recommendation. An effective information's filtering mechanism for news recommendations in a large-scale website such as Google News. We

first convey a log analysis on the change of user's interests in news topics over time. The log analysis convey variations in user's news interests and shows that the news interests of each users are influenced by the local news trend. It requires each user have at least two records. At this time, it can generate the fewer rules and the amount of users who can receives the recommendation is very few. We will continues to do this work and improve it in the future.

7. ACKNOWLEDGEMENT

8. REFERENCES

[1] Mansi Sood, Harmeet Kaur, "Preference Based Personalized News Recommender System," International Journal of Advanced Computer Research, Vol-4, Num-2, Issue-15, June-2014.

[2] K. Eniya, Priya Darsini, Dr. M. Latha, "A study on hybrid approaches with collaborative filtering for web page recommender system," International Journal of Multidisciplinary Research and Development.

[3] D. E. Chen, "The Collaborative Filtering recommendation Algorithm Based on BP Neural Networks," Intelligent Ubiquitous computing Education, pp. 234-236, 2009.

[4] J. Q. Fan, W. M. Pan, L. S. Jiang, "An Improved Collaborative Filtering algorithm combining content-based algorithm," Big Data and Smart.

[5] P. D. Shang, X. Duan, "Research on a Graph-Based Algorithm," International Symposium on Computational Intelligence and Design, pp. 17-21, 2008.

[6] J. C. Han, "Learning Fussy Association Rules and Associative Classification Rules," Fussy System, pp. 1454-1460, 2006.

[7] C. Li, Z. G. Luo, "A Hybrid Item-based Recommendation Algorithm against Segment Attack in Collaborative Filtering System," Information Management, Innovative Management and Industrial Engineering, pp. 403-406, 2011.

[8] Q. Wang, X. H. Yuan, M. Sun, "Collaborative Filtering Recommendation algorithm based on hybrid user model," Seventh International conference on The Fussy System and The Knowledge Discovery, pp. 1985-1990, 2010.