NEO NEWS RECOMMENDER JUNCTION

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ABSTRACT

Neo News Recommender refers to the application of computer and information technology for recommending news to users. A basic issue with news benefit sites is that the volumes of articles can overpower the users. The challenge is to help users discover news articles that are tout to read. Information filtering is a technology in response to this challenge of information overload in general. . The main architecture of our system includes data filtering, data preprocessing, data analysis, data optimization and so on. The aim of the project is to provide the personalized information on the Internet. It also helps to alleviate the problem of information overload which is a very common phenomenon with information retrieval systems and enables users to have access to products and services which are not readily available to users on the system. We have presented the implementation of NNRJ using the collaborative filtering technique and click behaviour, which is based on collecting and analyzing a large amount of information on users' behaviours, activities or preferences and predicting what users will like based on their similarity to other users. Use of web feeds and aggregator provides optimization to frequently updated news content and ensures privacy by not needing to join each site's email news letter. Use of web services on the other hand creates a localhost and android connectivity which gives connectivity to remote accounts on both interfaces[5]

Keyword: *Information filtering, webfeeds and aggregator ,localhost and android connectivity.*

1. Introduction

News recommendation system is becoming a very popular topic for recommendation systems due to the growing diversity,availability and use of news information service. A key challenge is to make news relevant within application user's dynamic environment and automatically push interesting information in application user. In this system, we mainly use collaborative filtering algorithm, which is based on the content, association rules and improved association rules to optimize the existing data. Through the combination of different algorithms, we can generate different recommendation lists. The main architecture of our system includes data filtering, data preprocessing, data analysis, data optimization and so on.

2. LITERATURE REVIEW

Jia Zhou and Tiejan Luo, has published a paper on Collaborative Filtering applications. The paper depicts about the Collaborative procedures which were as of now in utilized as a part of that era. It is expressed that the Collaborative Filtering procedures utilized as a part of that era could be separated into heuristic-based technique and model-based strategy. [1,2]The paper talks about the restrictions of the Collaborative Filtering procedures in that era and proposes a few upgrades to build the recommendation abilities of the systems. [1,2]. Micheal Pazzani discusses about recommending information hotspots for news articles or websites after learning in the essence of the user by learning his profile. This paper notice different sorts of data that can be considered to learn the profile of a user. In light of appraisals given by a user to various destinations, evaluations that different users have given to those locales and demographic data about users the proposals can be made. This paper portrays how the above data can be joined to give proposals to the users. [3]. Robert M Bell and Yehuda Koren, express that recommended frameworks provide recommendations to the clients in view of past user item relationship. In view of past user item relationship, the neighbors are processed which makes the prediction simple. The weights of the considerable number of neighbors are figured independently and are added simultaneously for some communications to 5 give upgraded answer for the issue. The proposed technique is expressed to give suggestion in 0.2 milliseconds. The preparation likewise takes less time not at all like exceptionally protracted time in vast scale applications. The proposed technique was tried on Netflix information which comprised of 2.8 million inquiries which were prepared in 10 minutes. [4]

3. PROPOSED METHODOLOGY

Collaborative filtering using Association Rules: Collaborative filtering algorithm starts from the comparison of the similarity of two users. According to the browsing history of other members of the same kind of users, we can speculate the news that the users may see in the future. Algorithm based on the content mainly build an item profile for each piece of news and a user profile for each user, and then calculate the similarity of user's user profile and news' item profile.
The algorithm steps are described as follows:

First, we take the single user's browsing history as a statistical unit, and we use

$\underline{U_i}(n_1 \rightarrow n_2 \rightarrow \cdots\cdots n_k)$ to represent the amount of user Ui 's browsing history.

We will take the adjacent newsgroup as an association rule. The rules are as follows: $(n_j,n_{j+1},n_{j+2},n_{j+3}) \rightarrow n_{j+4[support(n_j,n_{j+1},n_{j+2},n_{j+3},\ n_{j+4});\ confidence(n_j,n_{j+1},n_{j+2},n_{j+3},\ n_{j+4})]}$

In the recommendation system, a user may be provided with several recommended records. We will determine the final recommendation of news by comparing the results support.We use n_{recom} to represent the final recommendation of news, and support{nj,nj+1,nj+2,nj+3, nj+4} to represent the method produced by the recommendation set.[6]The final recommendation news formula is shown as follows:

$dec(n_{recom})=max(support(n_{last},n_i)), \quad (i=1,2,k)$

$N_1\ N_{total}$ [6]

CLICK DISTRIBUTION: The NNRJ classifies news articles into a predefined set of topic categories, $C=\{c_1, c_2, ..., c_n\}$, including “technology”, “sports”, and “entertainment”. In our log analysis, we computed the click distribution over the set of topic categories for individual users as well as the group of users in a country. We divided the time period into 14 months. Then, for each user u, we computed the distribution of the clicks in every month t, $D(u,t)$, represented as a vector over the set of topic categories:

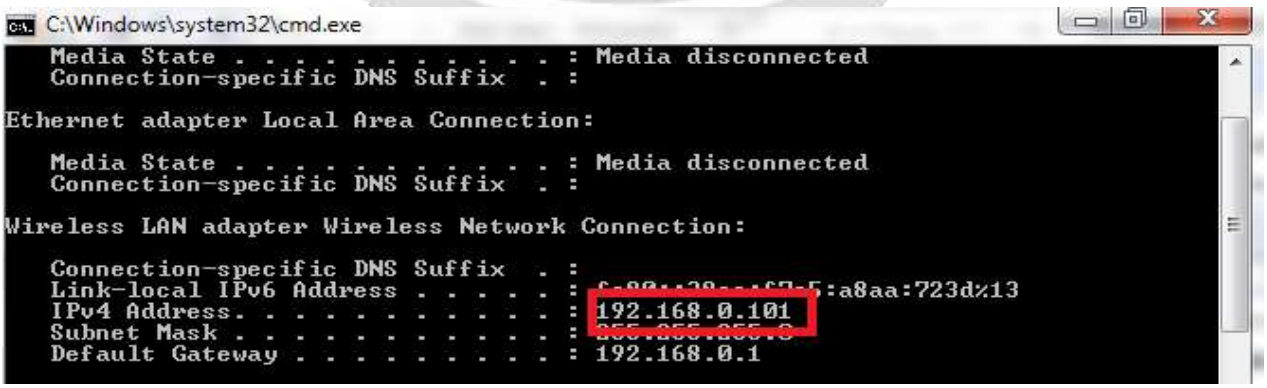
$$D_{u,t}=\frac{N1}{Ntotal}, \frac{N2}{Ntotal}, \cdots \frac{N3}{Ntotal}, \text{where } N_{total}=\sum N_i$$

N_i is the number of clicks on articles classified into category c_i made by user u in month t. N_{total} is the total

number of clicks made by the user in the time period. Thus, $D(u,t)$ represent the proportion of time the user spent.[6]

RSS web feeds using automatic filtering technique: RSS is a content delivery vehicle. It is the format used when we want to syndicate news and other web content. When this content gets distributed it is called a feed. It takes most people much time to look for new information from one website to other. With RSS readers, we can aggregate latest updates from multiple websites in one place creating a single view for this information. The application explained implements a web-based RSS reader which incorporates an Automatic Filtering Technique (AFT). The HTML format of web page displaying video RSS feeds has nearly thousands of lines in it. Hence great amount of accuracy was needed in designing the regular expressions. [7]

Localhost and Android Connectivity: The NNRJ, in addition to this uses web services using directed link structures and PHP, such that any changes made on either the website or application will be reflected on each other. This enhances the user experience and makes a desktop application a mobile friendly application on the go. Localhost of an Android device is localhost , 127.0.0.1. That refers to localhost of the computer running the emulator. You need to use the IP address of the computer, on whatever network that the computer and the device share. The IPv4address(as shown in fig. below) is which we will use to access our local host on our android phone over an internet connectivity. To test it is working type this ip address in your desktop browser where your localhost server is installed. Browser should display your localhost page successfully.



4. IMPLEMENTATION

Neo News Recommender Junction uses algorithms like collaborative filtering for recommendations to users according to user interest. The system is implemented in various modules through phased approach. The system collaborates various modules implemented and later integrated together. The modules are the login and register module, user interface module, the RSS Web feeds module, server connectivity, commenting and sharing module. The modules are implemented through website and android application which are linked through web services The android application is implemented on the android eclipse platform, the website been implemented using JavaScript, CSS, HTML and database connectivity using PHP which runs on local server executed on Xampp Server.We have introduced the execution of NNRJ utilizing the collaborative filtering strategy, which depends on gathering and dissecting a lot of data on clients' practices, exercises or inclinations and foreseeing what clients will like in light of their closeness to different clients. Utilization of web sustains and aggregator gives enhancement to every now and again refreshed news content and guarantees protection by not expecting to join each webpage's email bulletin. Utilization of web services then again makes a localhost and android network which offers availability to remote records on both interfaces

5. ACKNOWLEDGEMENT

I sincerely thanks to all authors in reference section. All papers in the reference section are very useful for my proposal. Their concepts, algorithms and techniques are very useful for my Project

6. CONCLUSION

These sorts of Recommender System are required in light of the fact that a human can squander time in looking news they are intrigued which can be utilized to accomplish something productive. This framework can be demonstrated as an eventual fate of analysis in data mining and an effective and a trustworthy framework through which the objective of efficient and proficient utilization of the accessible innovation can be accomplished soon. Android Platform being a canny platform to implement the application connected to the website that user-friendly

which will have a great impact on reading with proper time utilization. Due to which the framework produced, can be accessible effortlessly. Neo News Recommender Junction is the main stride towards the expansion in the technological headway in the industry of information mining and another technique by which the human endeavors can be decreased and the time utilization on immaterial news inquiry can be avoided. [5]

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