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Video Recommendation

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Abstract: Today's generation unlike the previous ones prefer the content with more multimedia and less of texts and as a result of which there is a enormous growth in services including multimedia and the huge amount of video contents that is offered in online social networks. Due to this huge variety and numbers available, the netizens have great trouble in getting their desired content. Therefore, a lot of personalized content recommendation systems have been suggested to fulfil the needs of all the individuals. However, the proposed systems tend to ignore the fact this social multimedia content data has led to the big data era and that's where big data comes into picture, which has greatly obstructed the process of video recommendation. In addition, none of the proposed systems consider both the privacy of user data (e,g., personal details, social status, ages and hobbies) and video service provider database (where all the videos are stored), which are extremely sensitive and of very significant value both content wise and commercially. To handle these problems, we propose a video recommendation system based on cloud assistance and big data and also on distributed online learning. In our proposal, service vendors are mapped onto as distributed cooperative learners who recommends videos according to user's context and liking, while simultaneously also adapts to the video-selection strategy which is based on number of user-clicks count to increase number of feedbacks or rewards.

Keywords: recommender system; data privacy; big data; provider database;distributed learning.

INTRODUCTION

There's a tremendous growth in the online social networks (OSNs) including multimedia where users can share and upload and consume all kinds of multimedia contents available online. As a result, given the variety of different genres and number of videos available in social media, discovering the videos of personal interest and recommending them to individual users becomes significantly important. Recommendation in today's market is one of the hot topics which is needed to be improved considering the population and video content and thus recommendation is considered to be one of the most important services which can provide such personalized multimedia contents available to users. A variety of successful video recommendation algorithms and recommendation engines have been proposed in the past and have been developed and exploited tremendously. For example, Google INC. adopted the content-based filtering (CB) recommendation system in its Ad-Words that is the Google advertisements services. The Google search engine maps on to the keywords and accordingly returns search results with keyword related advertisements. However, those advertisements are of not much importance and always neglected by end users and thus there's a gap between the need of the user and the content proposed to them. This is mainly because of the biased decisions of user's favourite content as there is no fixed criteria to choose one. Unfortunately, Google Ad-Words has been removed from the right side of the page. Amazon and Taobao with their recommendation system and framework achieved greater success recent years. Several companies have designed their own algorithms and have demonstrated initial successes in multimedia recommendation system design. And also it is reported that YouTube won its first Emmy i.e. a statuette awarded annually to an outstanding television program or performer for video recommendations. Actually, most Online social networks recommend video content to their users based on the user's rich context information (e.g., professions, social status, ages, hobbies and health conditions) contained in their released multimedia content. In this similar way several recommendation systems have been proposed and exploited.

LITERATURE SURVEY

IEEE Transactions on Multimedia (Volume: 17, Issue: 9, Sept. 2015) Social networking is used by people to build social networks and relations with one another. In today's world everything has gone digital where people like to post their day to day life activities with others on social media. Also, they want to share their ideas, perspective through pictures and videos. People share personal or professional interests, activities, connections etc. through this, billions and billions of user-related images are produced by people in many social networks today like instagram, facebook, snapchat etc and this specific form of user data is widely accessible to other individuals due online social sharing. When these user data related social information are only accessible to exclusive parties, these user-shared images are found to be an easier and effective

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alternative to discover user connections. These images and information is further used for recommending as it helps to know people's interests in various topics and things. Particular details of an individual's interest or activity is picked up which is later used to create a list of related videos. In today's world, with so much generation of data in every second and sharing it with other people with same interests and relations has increased to an immense scale. Sharing of enormous amount of information on internet raises important security and privacy issues. Security and privacy issues could be related to an individual's personal information like pictures, contact details, interests etc, important passwords, professional information that can be used by an opponent party and many more. In this paper, a mixture of approaches where privacy requirements are contained in a control system and shows a structure for formulating and enforcing of privacy and security policies. The major intention is to let a user, not a system or security administrator or an artificial system to formulate issue free terms and conditions for their online multimedia data. An additional requirement is that such a policy be aware from context. Context aware property best works for digital users using mobile apps and smart phones. They sought to deal with linking changes in the environment of systems. A method to verify these conflict free policies has also been made to ensure that crucial security requirements are not misused when these user driven rules are implemented.

IEEE Transactions on Multimedia (Volume: 15, Issue: 2, Feb. 2013) presents a simple technique in which the facial moods are captured in frames and are studied for the labeling of images. It is based on a technique which is based on the emotions of the users that takes as input the video sequences of the user expressions. Images are made of pixels. All pixels in a connected component share similar pixel intensity values and are in some way related to each other. Once all groups are determined, each pixel is labeled with a colour according to the component it has been assigned to. In this paper, with the help of facial expressions like sad, happy etc a video sequence is generated which acts as the input in this technique. Gabor filter has emerged as one of the famous object recognition, image content analysis techniques. It is a bank of parameters that includes frequencies, orientations and other definitions. An advancement to Gabor filter is filter selection into the design process. It helps in reducing computational complexity of texture extraction and provides improved classification. It derives from the video sequences the Gabor low level features and puts in a k-nearest techniques based on machine learning to generate image tags for the images in the dominance space. The facial expressions are used as content which helps to recommend.

In IEEE Transactions on Multimedia (Volume: 17, Issue: 6, June 2015) Sparsity refers to null values or populated and non-populated values. There are certain issues with it. The topic model (TM) method is an accurate way to solve the problem related to sparsity but is still far from satisfactory. In this paper, an author topic model-based collaborative filtering (ATCF) method is proposed where each other is connected to a mixture of topics which is further distributed over words. It provides comprehensive points of interest recommendations for social users. In our approach, user related topics, such as their cultural, sightings, or landmark, are taken from the geo-tag (a posting of geographical location to a picture or a video on social media website) related messages of photos via the author topic model instead of only from the GPS locations. This form of technique is used on massive amounts of multimedia big data. Advantages, success and performance of our method are tested by repetitive experiments on a large collection of data. By doing so, we receive a précised recommendation for our users. Personalized because it is associated with particular details individuals like their landmarks and cultural preferences.

PROPOSED SYSTEM

A video multimedia recommendation system based on cloud computing and big data which speeds up the recommendation process is proposed. The users are classified into separate categories according to their values and interest types. With the accurate classification rules, the context details and tags are not required to be mapped to the keys and computed, and thus the huge network overhead calculation is reduced. Moreover, user relationships, user contexts and user profiles are collected from video-sharing websites and repositories to produce multimedia recommendation rules, So that the proposed method can recommend desired services with customized personalization of users**.** Clusters of users are collected instead of user profiles details. To avoid the explosion of network overhead and there calculation, users behavior based clustering is performed at the first step, and the backend collectors calculate user clusters according to the clustering rules and then report accordingly the user cluster to the recommender only for more accurate recommendation (figure 1 and figure 2).

Advantages of the Proposed System

- A search system which ranks lists of all the best or desired videos.
- The proposed framework network component is more Reusable and extensible.
- Finding out the users and spammers who disseminate and spreads video pollution online by uploading redundant content, instead of classifying the content itself.
- Machine learning approach that specifically looks into the characteristics of known users so as to make the platform more intelligent and précised.
- Transaction-Least-Work-Left (TLWL) is a technique by which there is a new call routing to the server that

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has the least traffic at that particular time , where traffic (i.e., load) is based on relative estimates of transaction costs. TLWL works on the fact that the observation that INVITE transactions are more expensive than BYE transactions. On the proposed platform, a 1.75:1 cost ratio between INVITE and BYE results in the best performance and accurate recommendation.

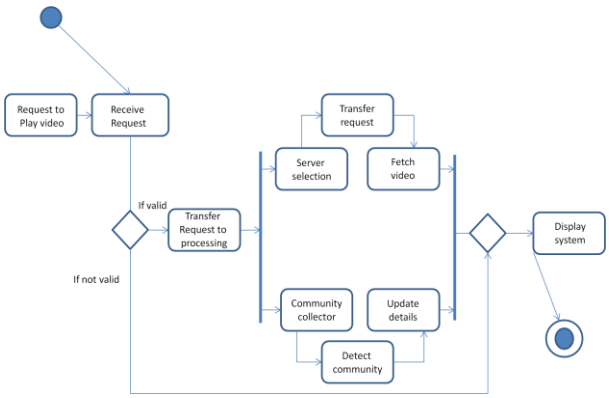

Figure 1 Activity Diagram

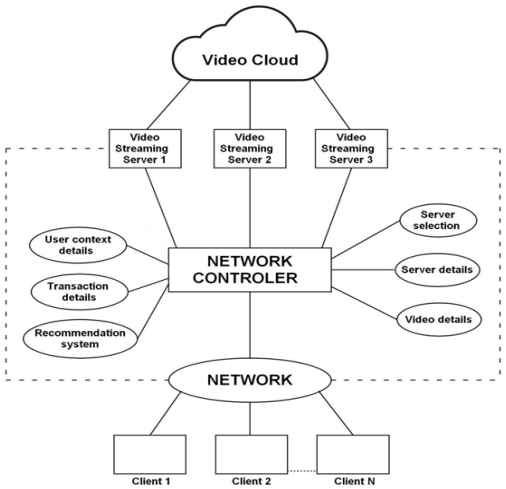

Figure 2 System Architecture

RESULTS

Figure 3 Page to Register

Figure 4 Creating user Group

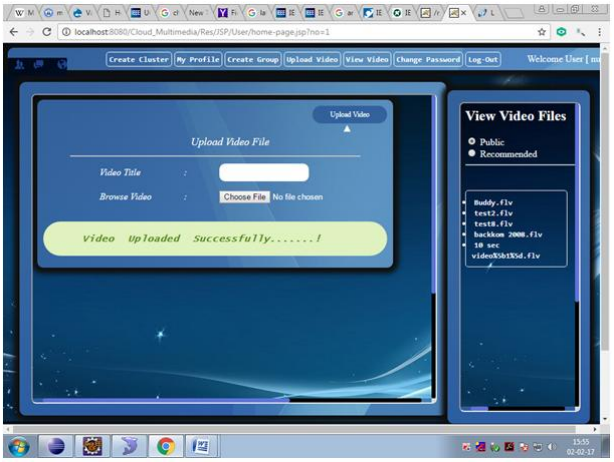

Figure 5 Uploading the Video

Figure 6 Recommending Videos

Here, personalized distributed online service is used. This helps any one sitting in any corner of the world with internet access at any time to share, retrieve or store videos that they like. This paper constitutes of personal clusters with people of same categories (location, age group, profession) to recommend each other videos that they

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might be interested in.
Once you sign up here (figure 3), user's profile will be made which will include personal information like their age groups , which profession they are in and their location. Also certain details like their name, phone number and email id. User will have to create their user name and passwords. At any point of time , user has the privilege to change his/her password. User can check their profile again when they are logged in.

Now, an individual can create cluster. Cluster is a group where people share same information in various categories. The concept of creating cluster helps to reduce latency and overhead networks. Users in cluster, if view a video to a threshold level then that video is recommended in the cluster for others to watch thinking that this cluster share same interests so they might like to view the video. A user can upload any video by clicking on upload video button. User has to provide a specific name with extension of the video and click on upload. Videos are directly stored in cloud where they are safe. On clicking View Video, user can watch a video from public or recommended list. Servers are used to increase the speed of fetching the videos from cloud and giving it to the application manager. A user from a particular cluster shares a video and is recommended in his/her cluster. The same video can't be seen in other clusters.

Thus, the personalized recommendation system is successfully working.

CONCLUSION

In this paper, a video recommendation system is proposed which is cloud assisted and also involves managing of big data. On the basis of the map reducing platform, we have analyzed three kinds of user behaviours, which includes interest groups, user context details, and profiles of the users. Along with the different characteristics of the three kinds of information we obtained, we adopt k-means , SCA and graph partition separately. Unlike the other recommending platforms, we have generated and stored all recommendation rules instead of storing the recommending lists itself. This technique thus helps us to use the components repeatedly. Additionally, we have also used a graph based rule reordering method in the real time recommendation by which we get to know the number of times a particular video is watched by a particular cluster or interest groups. Evaluation of the proposed video recommendation system overall shows that the proposed system provides higher quality of recommendation with more intelligence and also lower training latency thus speeding up the process of recommendation. Finally reducing the recommending latency. The overall benefit is not limited to speeding up of recommendation but also provide safety to individual users as well as video repositories by means of cloud security. This technique further is advantageous as it prevents the spamming of content online which is one of the root causes of cyber crime.

FUTURE SCOPE

A simple technique in which the facial moods are captured in frames and are studied for the labeling of images. It is based on an technique which is based on the emotions of the users that takes as input the video sequences of the user expressions. Images are made of pixels. All pixels in a connected component share similar pixel intensity values and are in some way related to each other. Once all groups are determined, each pixel is labeled with a color according to the component it has been assigned to. In this paper, with the help of facial expressions like sad, happy etc a video sequence is generated which acts as the input in this technique. Gabor filter has emerged as one of the famous object recognition, image content analysis techniques. It is a bank of parameters that includes frequencies, orientations and other definitions. An advancement to Gabor filter is filter selection into the design process. It helps in reducing computational complexity of texture extraction and provides improved classification. It derives from the video sequences the Gabor low level features and puts in a k nearest techniques based on machine learning to generate image tags for the images in the dominance space. The facial expressions are used as content which helps to recommend.

REFERENCES

[1] Z. Wang, W. Zhu and P. Cui, "Social media recommendation", social media retrieval Springer london, pp 23-42,2013.
[2] C.Ming, S. James and Z. Jie, "Connection discovery using big data of user-shared images in social media", multimedia, IEEE transactions on multimedia, Vol 17, no 9, pp 1417-1428,2015.
[3] A. Jeckmans, M. Beye and Z. Erkin et al, " Privacy in recommender systems," in Social media retrieval, Springer London, pp. 263-281, 2013.
[4] M. Cheung and J. She, "Bag-of-features tagging approach for a better recommendation with social big data," in Proceedings of the 4th International Conference on Advances in Information Mining and Management,pp. 83-88,2014.
[5] "Privacy by the Numbers: A New Approach to Safeguarding Data," Scientific American. [Online]. Available:http://www.scientificamerican.com/ article/privacy-by-the-numbers-a-new-approach-to-safeguarding-data/
[6] "YouTube wins its first Emmy for video recommendations you can't resist," The Verge. [Online]. Available :http://www.theverge.com/2013/8/1/4578544/youtube-wins-first-emmy-for-video-recommendations-youcant-resist.