



A Survey: Multimedia Content Mining Techniques using CA Based Approach

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Abstract— In last 10 years, there is a huge amount of multimedia data is generated by the different mediums like news agencies, social media, and other blogs. This is in the form of heterogeneous nature. Various queries to access that data are generated by the users which are based on their need and require that preference given to that data matches with the context of that query. To perform such operation a content aggregators CAs are used which are used to aggregate same type of data and predict data with respect to user query which is nearly match the user query. For this purpose a fast, accurate and efficient content aggregators are required which able to generate results with respect to users query and predict results to users query. In this paper an online learning technique is proposed in which CA is learns about users context from other CA rather than user content that make process fast and secure because there is no content is search just CA database is used to predict data as require by the user.

Keywords— Content Aggregation, Multimedia data, online learning

I. INTRODUCTION

In recent last 10 or 20 years tremendous increase in multimedia content is noted. But now now-days data is accessed by different mediums most probably by smart phones by the different apps so user can queried data as per there moods and an efficient mechanism is required which is Recommend data to the user about their queries. Because data is generated by the different vendors and mediums thus it is heterogeneous in Nature so a mechanism is required to match that data videos in context of user's query. That can help user to search desired video as per user's queries. Just like a search for a new video is generated by the user thus CA system is used to suggest a number of news.

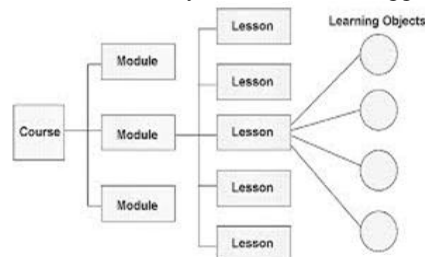


Figure 1.1: View of content access via content aggregator

Another example is shown in the figure 1.1, in which a user generate a search for lesson regarding their course to match this query a content aggregator first generate a module and then search for lesson is conducted, that way a number of lesson videos are suggested to the user as per their need. In figure 1.2 shows a frame work in which a distributed CAs framework is presented. In that framework user generates a request for multimedia content, that request first sent to CA and then CA match that request to the content database and suggest a number of videos to the user That fulfils user's request. For this purpose user goes to CA where CA already knows the preference of the user's context and characterized user on their preferences. In this system user's request for search content is sent to the content aggregator and then on the basis of user's context content aggregator requests content from media source which is connected to CA or another CA.

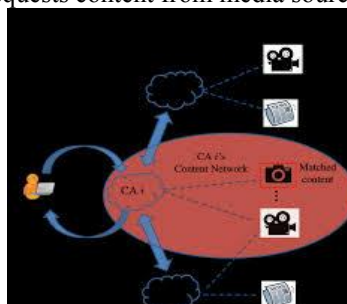


Figure 1.2: Operation of distributed content aggregator.

In below figure a no of content aggregator like (Dailymotion, Vimeo) are shown which are used to process users request, search for content and generate results on the basis of user's context



Figure 1.3: content Aggregator

II. LITERATURE REVIEW

Cem Tekin, Mehaela van Der Schaar [1] the huge growth in multimedia content in last decade. That data generated by multiple sources which is generated in heterogeneous form because data is generated by different resources that generate variety in the data which make difficult for a user to get on demand data. In this paper a distributed online matching based content aggregator is present which gathers data from different resources and suggest user data in context of their search. A distributive online matching algorithm is used to match the content which generated by heterogeneous producers in that algorithm aggregator can learns from the experience of the other CA's, in that CA can suggest content from multimedia sources which is that not connected directly to it. It learns about the content from the CA which is connected to it.

Eric Bruno, Stephane Marchand Maillet [2] in this paper a multimodel preference based aggregation technique is presented in which joint design a multimodel representation and a machine learning based fusion algorithm is used in which first a preference based representation is defined and then a rankboost fusion algorithm is used to map user's query. Preference space used in this paper is degraded but lightweight representation of original spaces is achieved, that model does not have such issues like dimensionality and space thus it can be able to fusion heterogeneous data. Rankboost algorithms facilitate to match the functionality of the whole multimodel system and provide a fast fusion mechanism for heterogeneous data

Roland Ordelman, Fransiciska De Jong, Martha Larson [3] in this paper semantic speech retrieval based technique is presented which provide a way to access multimedia data. This technique focuses on automatic speech recognition and spoken document retrieval, this technique is used for multimedia access in that broadcast news data puts a huge advantage and in that case that is in clean and organized structure which is used for but this technique still not used so widely because uncertainty in the speech data, this technique uses out of vocabulary words to enhance the performance of the technique and in that way it is an efficient technique but it need some improvement to use in real world content retrieval.

Alberto Messina, Maurizio Montagnuolo [4] this paper presents a cross model technique is used to aggregate multimedia, data in this technique semantic relevance is use to retrieve data, in semantic relevance measures that how secondary items are relevant to the information needed by primary items. Cross model able to generate these semantic relations in these distributed heterogeneous data and retrieve information or multimedia data. In this process first affinity analysis is conducted to map the behavior of the items and then hybrid matching is used to match similar patterns and then a partition is induced and representation of items is generated and finally multimodel clusters are formed. But the performance of the multimodel cluster in not provided which generate data redundancy in the method or different clusters.

Sameer Amir, Petrik Blandin, Laon Marius Bilasco, Chabane Djeraba [5] in this paper a generic met model, called CAM model is presented in that model a framework is presented that merges all the information about the content, services, physical, technical environment to provide homogenous access to the content. This model concern about three aspects one is to split metadata in bloodstream of metadata delivery which enables a distributed access to the data. And an interface is used which makes encoding of multimedia data compatible to other multimedia data. In second phase it merges all the services and content to provide a collaborative access to the multimedia content. In third it relates all the user consumption to make it to reach other communities of the user

III. CONCLUSION

Due to the tremendous increase in generation of multimedia contents, in recent years. An efficient way to access such content in this survey [2] propose a multimodal technique which is not provide a fast access to the data, in [3] a speech recognition retrieval technique is presented which is yet to evolve in near future. In [1] a contextual online learning technique is presented in which Content Aggregator can learns from other content aggregator about user preferences, that speedup the process of prediction for user requests. For propose work enhance online learning technique is presented which can match real world scenario to match user's requests.

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