International Journal on Recent and Innovation Trends in Computing and Communication ISSN: 2321-8169
Volume: 3 Issue: 8 5111 - 5114

Review on QA Performance Improvement using Multimedia Techniques

Priyanka N. Patil
Department of Computer Sci. & Engg
Walchand Institute of Technology
Solapur, India
Pnpatil775@gmail.com

DR. R. B. Kulkarni
Department of Computer Sci.& Engg
Walchand institute of Technology
Solapur,India
Raj_joy@yahoo.com

***Abstract*—** CQA (Community question Answering) which is the record of millions of question and answer which is created. CQA user to provide a rich resources of information which is missing at Web Search Engine and to automate and enhanced the process of locating the high-quality answer question at a CQA.CQA archived the question that are matched by the CQA system with respect to QA which significantly minimizes the user time and efforts involved in searching for answer to Question. CQA forum usually provide only the textual answer which are not enough for many question. In this paper, we propose a scheme that will be able to enrich textual answer in CQA with appropriate using of media data. In this project our scheme consists of 3 components such as the Answer Medium Selection, The Query Generation for Multimedia, The Multimedia data Selection and Presentation. In this our approach is to automatically determine which type of the media information can be added to enrich the textual answer. In this by processing for large datasets QApair and adding them to a pool, in this our approach as a user's can find multimedia question answer (MMQA) by matching their questions with those in the pool. Different from a lot of multimedia QA research efforts that attempt to directly answer the question with Image and Video data. In this our approach is built based on Community Contributed Textual Answer and can deal with more complex questions. In this we have also conducted extensive experiment on a multi-source QA datasets there the result Demonstrate the effectiveness of our approach.

Keywords- *CQA, MMQA,Answer Medium Selection,Query Generation in Multimedia,Multimedia data selection and Presentation.*

*****

I. INTRODUCTION

As the rapid growth in the internet information now days the social websites is changing enormously. The completely new trends have raised the particular usages of search engine for information access is increasing rapidly. In these events the users have to search the question on web he gets some sort of lists of documents and also the user needs in order to browser through each documents to achieve information to the given question. So this question to answer may lead to information overloading problem which means this problem can possibly be solved by Question Answering System. The QA method which mainly dedicated to some specific domain and this question answering method provide precise perform. The question answering system is mainly divided into the open domain process and closed domain system. In the close domain system there is extracting of information from structured data and converting the natural language question into the database query. In the open domain system without resorting the data to database, it uses large collection of unstructured data which helps the user to cover many subjects. In this open domain system the information can be added and updated constantly and so there's no manual work for building in the database. So these QA techniques can efficiently handle the informative questions for example how, what, when, where like that. In this it really is difficult to answer the question like what is your opinion about. And how will it be? etc. In the automatic QA it has nevertheless difficulties in answering the complex question to overcome this concern CQA system can solve this concern. In this it has a huge pool for sharing the technical knowledge but place where anyone can search for the advice and opinion. In the CQA answering, the user post question as well as the answer is obtained from the several sources with different participants. So in this particular the problem in automatic question could be replaced with answer that provides the human intelligence. So the gap relating to the question and answer is bridged with the crowed sourcing intelligence of the city member. Existing system of CQA including the various sites Yahoo! Answer, WikiAnswer, Stack overflow, AskMeltafilter etc. There exists problem while using the available CQA it could just produce textual answers or urls that url to supplementary to aid image and also video. In which these textual answers are certainly not sufficient to answer some question like how the sky looks like? So for this type of question there's a limitation to answer it correctly. So if this question is answered using the image of sky this will probably be more informative. For this we all introduced MMQA Multimedia Question Giving answers to the sites. In which this MMQA tries to be able to enrich the textual answer extracted from available QA sites and enriches people with the textual answer and multimedia data such as image and video.

II. LITERATURE SURVEY

Existing community question-answering forums usually provide only textual answers. However, for many questions, pure texts cannot provide intuitive information, while image or video contents are more appropriate. In this paper, we have introduced a scheme that is able to enrich text answers with image and video information. Our scheme investigates

a rich set of techniques including question/answer classification, query generation, image and video search reranking, etc. Given a question and the community-contributed answer, our approach is able to determine which type of media information should be added, and then automatically collects data from Internet to enrich the textual answer. Different from some efforts that attempt to directly answer questions with image and video data, our approach is built based on the community-contributed textual answers and thus it is more feasible and able to deal with more complex questions. We have conducted empirical study on more than 3,000 QA pairs and the results demonstrate the effectiveness of our approach [1].

Answering (QA) is a technique for automatically answering a question posed in natural language. Compared to keyword based search systems, it greatly facilitates the communication between humans and computer by naturally stating users' intention in plain sentences. It also avoids the painstaking browsing of a vast quantity of information contents returned by search engines for the correct answers. However, fully automated QA still faces challenges that are not easy to tackle, such as the deep understanding of complex questions and the sophisticated syntactic, semantic and contextual processing to generate answers. It is found that, in most cases, automated approach cannot obtain results that are as good as those generated by human intelligence [2].

One definition of a question could be 'a request for information'. But how do we recognize such a request? In written language we often rely on question marks to denote questions. However, this clue is misleading as rhetorical questions do not require an answer but are often terminated by a question mark while statements asking for information may not be phrased as questions. For example the question *"What cities have underground railways?"* could also be written as a statement *"Name cities which have underground railways"*. Both ask for the same information but one is a question and one an instruction. People can easily handle these different expressions as we tend to focus on the meaning (semantics) of an expression and not the exact phrasing (syntax). We mainly focus Definition questions, which unlike factoid questions require a more complex answer, usually constructed from multiple source documents [3].

With the proliferation of text and multimedia information, users are now able to find answers to almost any questions on the Web. Meanwhile, they are also bewildered by the huge amount of information routinely presented to them. Question-answering (QA) is a natural direction to address this information over-loading problem. The aim of QA is to return precise answers to users' questions. Text-based QA research has been carried out for the past 15 years with good success especially for answering fact-based questions. The aim of this paper is to extend the text-based QA research to multimedia QA to tackle a range of factoid, definition and "how-to" QA in a common framework. The system will be designed to find multimedia answers from Web-scale media resources such as Flicker and YouTube. This paper describes the architecture and our recent research on various types of multimedia QA for a range of applications. The paper also discusses directions for future research [4].

Multimedia search over distributed sources often result in recurrent images or videos which are manifested beyond the we propose novel reranking methods to leverage the recurrent patterns to improve the initial text search results. The approach, context reranking, is formulated as a random walk problem along the context graph, where video stories are nodes and the edges between them are weighted by multimodal con- textual similarities. The random walk is biased with the preference towards stories with higher initial text search scores – a principled way to consider both initial text search results and their implicit contextual relationships. When evaluated on TRECVID 2005 video benchmark, the pro- posed approach can improve retrieval on the average up to 32% relative to the baseline text search method in terms of story-level Mean Average Precision. In the people-related queries, which usually have recurrent coverage across news sources, we can have up to 40% relative improvement. Most of all, the proposed method does not require any additional input from users (e.g., example images), or complex search models for special queries (e.g., named person search)[5].

textual modality. To exploit such contextual patterns and keep the simplicity of the keyword-based search, we propose novel reranking methods to leverage the recurrent patterns to improve the initial text search results. The approach, context reranking, is formulated as a random walk problem along the context graph, where video stories are nodes and the edges between them are weighted by multimodal con- textual similarities. The random walk is biased with the preference towards stories with higher initial text search scores – a principled way to consider both initial text search results and their implicit contextual relationships. When evaluated on TRECVID 2005 video benchmark, the pro- posed approach can improve retrieval on the average up to 32% relative to the baseline text search method in terms of story-level Mean Average Precision. In the people-related queries, which usually have recurrent coverage across news sources, we can have up to 40% relative improvement. Most of all, the proposed method does not require any additional input from users (e.g., example images), or complex search models for special queries (e.g., named person search)[5].

 ISSN: 2321-8169
5111 - 5114

III. PROPOSED SYSTEM

For a given QA pair, our scheme first predicts which Type of Medium is appropriate for enriching the original textual answer. Following that, it will automatically generate a query based on the QA knowledge and then performs multimedia search with the query.

. In the given proposed system we have lots of improvement in the work for answer medium selection; we add a media resource analysis component. The results of the media resource analysis are also regarded as the data to enable a better answer medium selection.

1. Answer medium selection. Given a QA pair, it predicts whether the textual answer should be enriched with media information, and which kind of media data should be added. Specifically, we will categorize it into one of the four classes: text, text+image, text+video and text+image+video. It means that the scheme will automatically collect images, videos, or the combination of images and videos to enrich the original textual answers.

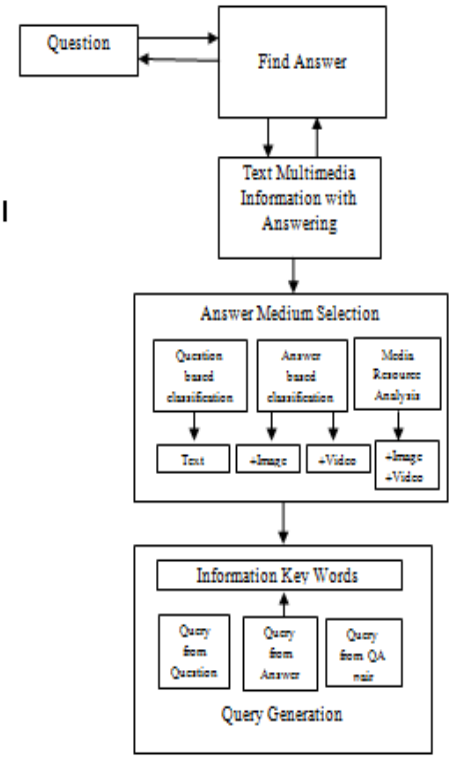

Fig 1:-Block diagram illustrating the proposed multimedia Question Answering System

.

2. Query generation for multimedia search. The aim is to collect multimedia data that we need to generate informative queries. Given a QA pair, this component extracts three queries from the question, the answer, and the QA pair, respectively. The most informative query will be selected by a three-class classification model

For the query generation for multimedia search this component extracts three
Queries from the question, the answer, and the QA pair, respectively.

- First, we will convert the question to a query, i.e., we convert a grammatically Correct interrogative sentence into one of the syntactically correct declarative sentences or meaningful phrases.
- Second, we identify several key concepts from verbose answer which will have the major impact on effectiveness.
- Finally, we combine the two queries that are generated from the question and the answer respectively we obtain three queries, and the next step is to select one from them.

Since we need to choose one from the three queries that are generated from the question, answer and the combination of question and answer. In this method the aim to work for the better query generation.

3. Multimedia data selection and presentation. Based on query generation, in this the images and video data are collected with multimedia search engine. For multimedia data selection and presentation, we will also propose a method that investigate image search results to replace the original text analysis approach in judging whether a query is person-related or not.

4. Finally, query-adaptive reranking and duplicate removal are performed to obtain a set of images and videos for presentation along with the original textual answer. Different from the conventional MMQA research that aims to automatically generate multimedia Answers with given questions, we will propose to build based on the community-contributed answers, and it can thus deal with more general questions and achieve better performance

IV CONCLUSION

Ihe system existing uses an innovative scheme to answer the given pair of questions using media data by using supplementary textual answers in CQA. But their then seems to be difficult to extract the proper answer for a given pair of QA. For a given pair of QA, our scheme is to first

predict which type of medium is appropriate for given type of QA for enriching the original textual answer. Following this it will automatically generates the query based on the QA knowledge and then it will performs the multimedia search with the given query of QA.For example; this system will be fail to generate the logical multimedia answers then if the generated queries are verbose and complex. If For a several complex questions the videos is the one that will enriched the give QA, but for a given type actually only parts of them are informative. Then, presenting the whole videos leads to giving the wrong idea .

Another problem is the lack of diversity occured due to the Generated media data. For this purpose we have adopted a method to remove duplicates that occurs, but in many cases the more diverse results may be with the better result .

REFERENCES

[1] Liqiang Nie, Meng Wang, Member, IEEE, Yue Gao, Zheng-Jun Zha, Member, IEEE Tat-Seng Chua, Senior Member, IEEE, "Beyond Text QA: Multimedia Answer Generation by Harvesting Web Information", IEEE TRANSACTIONSON MULTIMEDIA, VOL. 15, NO.2, FEBRUARY 2013

[2] Liqiang Nie, Meng Wang, Zheng-Jun Zha, Guangda Li and Tat-Seng Chua, "Multimedia Answering: Enriching Text QA with Media Information".

[3] Mark Andrew Greenwood "Open-Domain Question Answering "

[4] Tat-Seng Chua, Richang Hong, Guangda Li, and Jinhui Tang,"From Text Question-Answering to Multimedia QA on Web-Scale Media Resources".

[5] Winston H. Hsu Lyndon S. Kennedy Shih-Fu Chang, "Video Search Reranking through Random Walk over Document-Level Context Graph".

[6] Sumna V P. Afsar P,"Beyond text QA Multimedia Diverse Relevance Ranking based Answer Generation by Harvesting Web" International Journal of Advanced Information Science and Technology (IJAIST) ISSN: 2319:2682 Vol.30, No.30, October 2014

[7] Maria Soledad Pera Yiu-Kai Ng, "A Community Question-Answering Refinement System"

[8] Tat-Seng Chua, Richang Hong, Guangda Li, and Jinhui Tang, "From Text Question-Answering to Multimedia QA on Web-Scale Media Resources".