

# SURVEY PAPER ON MULTIMEDIA QUESTION ANSWERING

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## ABSTRACT

From last few years, cQA forum is getting more popular. In this forum information seekers can get answers from large set of question answer pairs. The registered users can post the question as well as able to find the answer respectively. Existing QA services can provide only textual answers but because of the textual data we are unable to get accurate and perfect information many times. So, we find a novel idea for getting accurate answers with the help of multimedia data. Our forum is consisting of three components: answer medium selection, query generation for multimedia search multimedia data selection and representation. This system automatically decides the type of medium to be added to inundate the textual data, then cast up those data with textual information. Our approach is constructed rooted on community contributed textual answers and capable to handle complex questions.

## I. Introduction:

Question answering technique is used to answer the question automatically. It provides the interface between human and computer, compared to keyboard based search system. It also ignores the painstaking browsing which is used to get accurate and perfect answers. But still there are some disadvantages of existing QA that it is not easy to tackle or handle because it requires deep understanding of complex question and sophisticated of syntactic, semantic and contextual processing to generate the answer. In most cases, the result obtained by automated approach is not as good as, those generated by human intelligence.

To get the information online community QA is a popular alternative. In cQA, information seekers can post the question on any topic and gain answer supplied by other users. By creating community efforts, they are able to obtain best answers. cQA provides better answer quality because they are produced based on human intelligence.

Today's cQA forums only provide textual answers, but the proposed cQA forums provide the textual answer by adding the MM contents and provide best and accurate answers to information seekers. Actually there are many answer that directly shows the links to images or videos which is used to get supplementary information in the form of media data.

In our paper rich set of techniques are used including question /answering classification, query extraction, image and video search reranking etc. Our scheme consists of three main components:

1] Answer medium selection:

It determines, what type of medium is to be selected to enrich the textual answer for eg. “ who is the prime minister of India ?”. In this case, the textual answer along with the image, provides sufficient information to the user. Here image will enrich the textual answer.

2] Query generation for multimedia search:

This method is used for generating the query before performing the search. Queries will help to retrieve the most related image and videos from web.

It includes two steps:

A] Query extraction: It is nothing but to extract informative keywords from question and answer.

B] Query selection: Query can be selected either from question or answer or combination of both.

3] Multimedia data selection and presentation:

The query which is generated earlier is used to perform searching of relevant data.

## II. Literature Survey:

Author Ligiang Nie, Mengwang, Zhen-Thu Zha, Guangda Li and Pat-seng chva in year 2011, has proposed multimedia answering: Enriching Text QA with Media Information.

In this work, they proposed a scheme to enrich text QA with media information, for given QA pair from cQA, scheme predicts which medium is appropriate to enrich original textual answer.

Author Darshana D. Ambalkar and vaishali Pujari in year 2014 proposed Multimedia Based community question answering by Harvesting web based information.

In this paper they describe motivation and evolution of MMQA system on basis of QA knowledge, it generate QA queries and performed multimedia search operation for that Query. After query adaptive reranking and duplicate removal operation performed to obtain more accurate multimedia data along with textual answer.

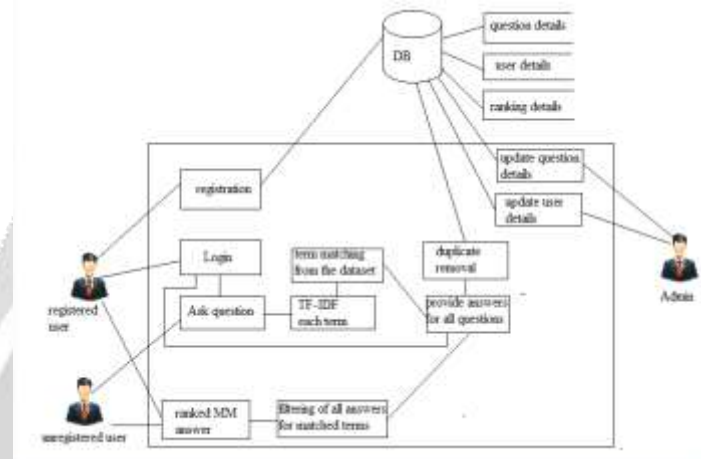
Zoltan Gyongyi, Jan Pedersen etc proposed several aspects of user fundamental ways i.e. 1] some users asks focused questions, triggered by real information needs. 2] Many question are meant to trigger discussions which encourage the users to put their opinions. 3] Much of interaction on Yahoo! Answer is just a noise. People post random thoughts as question and may be request for instant messaging.

Lada A. Adamic, Jun Zhang and Mark S. Acherman, seek to understand YA's knowledge sharing activity in “ knowledge sharing and Yahoo Answers: Everyone knows something ”. They analyze the forum categories and cluster them according to content characteristics and interaction pattern among the users. They found that, with the diversity of categories in which one can participate some users focus narrowly on specific topic, while others participate across categories. They found that lower entropy correlates with receiving higher answer ratings, but only for categories where factual expertise is primarily sought after. They combine both user attributes and answer characteristics to predict, with in given category, whether a particular answer will be chosen as the best answer by the asker.

Richard C. Wang, Nico Schlaefel, William W. Cohen and Eric Nyberg proposed SE approach is capable of improving the performance of QA system on list questions by utilizing only their top four answer candidates as seeds. They illustrated a feasible and approach into any QA system. They also discovered that higher quality candidates support more effective set expansion.

Tom Yeh, John J. Lee, Trevor Darreil proposed the photo based question answering in 2008. They combines the recent technical achievements in question answering and image matching. They motivated the development of photo based QA systems by highlighting the problems with text-based QA systems and demonstrating the usability benefits for these systems to understand images. They discovered three layer architecture based on template-based, IR-based and human-based QA. They constructed a data set and used this dataset to demonstrate the effectiveness of category-filtering, keyword-filtering and question matching to evaluate the technical feasibility of that architecture.

### III. Architecture:



### IV. Methodology:

In our paper rich set of techniques are used including question /answering classification, query extraction, image and video search reranking etc. Our scheme consists of three main components:

#### 1] Answer medium selection:

It determines, what type of medium is to be selected to enrich the textual answer for eg. “ who is the prime minister of India ?”. In this case, the textual answer along with the image, provides sufficient information to the user. Here image will enrich the textual answer.

#### 2] Query generation for multimedia search:

This method is used for generating the query before performing the search. Queries will helps to retrieve the most related image and videos from web.

It includes two steps:

- A] Query extraction: It is nothing but to extract informative keywords from question and answer.
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#### 3] Multimedia data selection and presentation:

The query which is generated earlier is used to perform searching of relevant data.

### V. Advantages:

- Save time to search any information on the community.
- Provide appropriate information about any question asked in the community.

## VI. Applications:

- The proposed system can be useful in community like college, school.
- Also used in the sport, educational, politics community where no of people comes together and share the knowledge.

## Conclusion:

The multimedia QA works in some domains and hardly can handle some of complex questions. Different from these, our aim is built based on cQA. Rather than directly collecting multimedia information for answering the questions, this method only search images and videos to improve text answers provided by the humans. This is our approach that deals with more general questions and to obtain the better performance.

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