Generating Multimedia Answer By Collecting Web Data

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Abstract—Community question answer has become very popular in last decade. It give authority to community member to share their views by giving answer to given question and gives any general user to get answer From best set of answered question. However existing CQA forms mostly provide answer only in natural language which in textual format which is not satisfiable for many community users. In this, we propose a system that is enhance by adding most suitable multimedia data like image and video. This system automatically approaches for most suitable multimedia information should be added to improve the textual information. Very large number of MMQA research efforts that appear to directly answer the ask question with image and video. Data but our approach is different. We build based on community based text formatted answer that’s why it is able to answer with more complex questions.

Keywords- CQA (Community Question Answering), MMQA (Multimedia Question Answer), Multimedia information, Community users, Re-ranking.

I. INTRODUCTION

Question answering is a technique for automatically answering a question that is posted in a natural language. In that, the searching system is based on keywords. It largely provides interface between computer systems and humans. It avoids unwanted job of browsing large amount of informative content from search engines. In this we are going to provide expected answers of given questions. It is observed that, mostly automated approach is not feasible to obtain results that are as good as those generated by human intelligence. With the rapid change and increase in existing communication technologies, community question answering evolved popular alternative to get information online. Wiki answer, ask me, yahoo answer are the best example of community question answering. Attributes or Objectives of proposed system are to develop better web application for question answering system, the output will be provided in four format first only texts, Second texts + videos, Third texts + images and texts + videos + images. These are the four outputs of proposed system. User friendly GUI, faster execution, more accuracy in the results, proper multimedia results for user query is the main feature of proposed system.

Problem definition of proposed system is “Textual answers may not always provide proper results and not easily understandable. So we are providing not only textual information but also multimedia information in proposed system. In this system we are also providing text, text + video, text + image, text + video + image or it can be separated according to query.”

For example, suppose user enters a query “how to make a cake?” to answer this query we are providing answers in text as well as video format. In community based question answering search engines were providing only hyperlinks but proposed system gathers all the information related to the query fired by user.

II. RELATED WORK

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The Research on QA started in 1990s. It mainly focused in some specific domain. Depending on type of question and answer QA is classified into four different domains Open domain, List QA, Definitional QA and Restricted QA. The example of present system of QA are Yahoo Answer, ask meta-filter and wiki Answer which supports pure text only. But only text based answer is not sufficient for user to understand the answer. To overcome such a problem MMQA was introduced. It provides the facility to add image and video with text.

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<th>Author</th>
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<td>M Thenmochi</td>
<td></td>
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<td>Also provides re-ranking algorithm on graphs for images and videos to make it more relevant.</td>
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Figure 1. Literature Review

III. PROPOSED SYSTEM

The digital information on web is increased over the web. Now a day searching information about specific topic is very essential task. The multimedia content such as video or images are classified into two categories such as text based search and content based search. In the text based search textual queries uses specification of term based desired media’s for searching media data to match with the surrounding textual descriptor. To improve the multimedia search by extracting the visual information of images and video it uses re-ranking algorithm. Re-ranking algorithm use two techniques such as pseudo relevance feedback and graph based ranking list.

Figure 2. User Enters a Query

Figure 3. Generated Answers

Both techniques rely on the visual similarities between media entities. Traditional methods normally measures the similarities based on fixed set of features extracted from media entities. But the estimation should query adaptive. Suppose one want to find the person then he should measure the similarities of facial features instead of extracted from whole image. It is sensible as information seekers as the one wants to find the person rather than other objects. The queries are classified into two classes, one is person related and other is non-person-related and then use the similarities measured from different features in accordance with the query type.

Figure existing CQA shows the related work done according to requirement. In this system, it contains the search box for searching a particular keyword or user can enter any question. like traditional search engines, it interprets the user questions and keywords and compares it in its
database of 500 QA pairs. According to information present in its database, it shows the result. The result it is displaying is in all three formats is shown in above figures.

IV. SYSTEM ARCHITECTURE

System architecture has three modules Answer medium selection, Query generation, Information selection and presentation.

4.1 Answer medium selection
When user submits the query to the system it predicts which multimedia information should be used to enrich the textual answer. For some questions only textual answer is sufficient; there is no need of any multimedia information, but in some questions, need to add image or video or both. The selection of answer medium is a combination of text, image, and video, which depends on user. It gets classified into four classes such as first is text, only textual answer is sufficient. Second will provide text + image, image needs to be added with textual answer. Third will provide text + video, along with textual answer video is added too. And the last will provide text + image + video; both image and video should be added with text answer.

4.2 Query generation for multimedia search
Prior to search on multimedia search engine to collect related multimedia data from the web we need to generate appropriate queries from text QA pairs. This can be accomplished in two steps: first step is Query Extraction and the second step is Query selection. In query extraction step we need to extract a set of informative keywords from QA pair which are usually very complex. For each QA pair, we can generate three queries: one from question, one from answer, and one from both question and answer. In the second step, as there are three queries to select one query from them, the second step adopts some features of POS histogram and search performance prediction. On query related to complex verb, POS histogram is used. Search performance prediction is used for those queries who cannot return satisfactory result.

4.3 Multimedia information selection and presentation
To collect multimedia data such as image and video, we require generating queries through a search engine but most current commercial search engines support only text-based indexing and return a lot of unwanted results. To overcome such problems, graph-based re-ranking methods are used to identify whether it belongs to either person-related query or non-person-related query. If the query is person-related, then face detection is performed on each image and video key frame. If it does not contain a face, then it will not consider in re-ranking.
At the end the gathered images and videos are presented to the user with the textual answer.

V. MATHEMATICAL MODEL

The mathematical model for the proposed system is explained with the help of set theory. In set theory there are three parameters as input, function and output. For the proposed system these three parameters are explained as follows:

S = I, F, O
I = Set of inputs
O = Set of outputs
F = Set of functions

Input i.e. I: - Text
Output i.e. O: - Text, Text + Video, Text + Image, Text + Video + Image.
Functions i.e. F: - Query generation, Display answer, Get answer, Display.

CONCLUSION

We describe the real motive and revealing the ideal of MMQA (Multimedia Question Answer) and it is observed that the existing systems mainly highlight on set of limited domains. Our goal is to propose an unusual scheme to reply for the given questions using multimedia data by taking the effort of exaggerating the textual answers in cQA. Distinguishing from the conventional MMQA research that focuses on automatic generation of multimedia answer with given questions, our approach is constructed based on the answers contributed by the community and thus can deal with more generic questions and generic questions and acquires better performance.

REFERENCES


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