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A review: An Approach for Extracting Relevant Answer for QA System

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***Abstract*—**Through internet many users post different question and get answer of that question by different views. Given system will workon the base to give answer to question within time and make available relevancy in answer by working on a techniquecalled Pairwise learning. For gettingthe similar questions is very difficult in any Question Answering (QA) System. Any question in the group of candidates comes withconsists of several answersand the user has to wait for a long time. To overcome from this scenario, an approach was proposed,a new model for Peer Learning to Learn, that is, rAnk Model, which can classify candidates from the set of relevantquestions.Specifically, it has two aspects i.e one offline learning aspect and second is online search aspect. In theonline searching system, get a list of answer candidates for the given question by means of discovering itscomparable or similar questions by proposed algorithm. A system at that point sorts the most relevant answer option by utilizing the offline searching to calculate the orders. This model is effective and get better performance than severalexisting questions answer selection system. In this given system, system recommend the question to other similar user to answer the askedquestion based on past history of users.

Keywords—Answer relevancy, Community QuestionAnswering, Questions-Answers pairs, Pairwise learning.

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I. INTRODUCTION

On the internet, user often has to deal with problem for questions is probably due to several reasons: 1) mentioned questionis not properlywritten . 2) given cQA systems can hardly deal the new recently posted questions to the correct respondents and 3) user not getting correct answer, for that he/she has to waste time to search. This is the thing which is happening in CQA forums, so only authorized persons and experts can answer to these type questions. With respect to the first scenario, the application qualitymodel has been well studied, which can evaluate the quality of the application and remind respondents to reform theirquestions,queries. Routing applications work by finding the resources of the current given system, particularly human resources. So the solved questions from the history, it is possible to reuse for new questions. In fact, number of past questions answers pairs, over time, QA pairs have been placed in the cQA databases for efficient handling. Hence, information searchers have a good chance of getting direct answers looking for databases/repositories, instead of waiting for a long time. However candidates returned from the main application are generally associated with many of answers and worked on how to select the correct answers from the relevant question sets are relatively poor. Whenever any question is asked, instead of using naively choosing the correct answer, In this paper, werepresent a new Pairwise Learning, through which it can find from the relevant question set. Figure 1 shows theworking of the model, which consists of two aspects: offline learning and online research.

A. Motivation:

The motivation behind this is to cover the problem offinding the same questions, Because, any question have several answers, and hence users have to wait more time to find best answer. And hencewe got motivated to develop a Pairwise Learning for ranking i.e PLANE aspect which will list answer

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candidates fromthe relevant questions set from available question.

B. Scope:

1.The given system will try to give relevant answer to user within a time.
2.It will use in community question answer system for efficient handling.

II. REVIEW OF LITERATURE

1. In generating a vote, attention of a users is diverted by appearance and position of the answer. In order to correct quality of answer Previously, these mistakes are ignored. As in a result, the top answers obtained from this method are not trustworthy, if the count of votes for the current question is not adequate. The author resolve this problem by inspecting two types of mistakes; position bias and appearance bias. To finding the existence of these mistakes, author introduced a joint click model for dealing with these two problem[5].
2.The author designed system for Selection of Answer fromCommunity Question Answering. In this task, the systems thread in the Community Question Answering set. This system bunch together sixteen features belong to five groups to forecast the quality of answer. This result model find the best result in sub task A for English, both in F1-score and correctness[6].
3.The author represents how to automatically answer questions posted to Yahoo! Answers community question answering website in real-time. This system combines candidates that extracted from answers collection to relevant questions previously posted in Yahoo Answers and web passages from documents retrieved using web search. Trained linear model rank the candidates and the top candidate is given as thefinal answer. The ranking model is trained on question andanswer (QnA) pairs from Yahoo! Answers archive usingPairwise ranking criterion. Candidates are represented witha set of features, which includes statistics about candidatetext, question term matches and retrieval scores, associationsbetween question and candidate text terms and the scorereturned by a Long Short-Term Memory (LSTM) neuralnetwork model[7].
4.The author come up with a three level plan, which targetto generate a query-based and summary-style answer inform of two aspects, that is redundancy and novelty. Mainly,First we gets a collection of Qas to the given question, andthen proposed a smoothed Naive bayes system to find thetopics of answers, by manipulating their related categoryinformation[1].
5.The author propose and developed a multivisual conceptranking (Multi-VCRank) technique for retrieval of image.The prime concept is that by using several visual conceptsan image can be displayed, and visual concepts as hyperedges are use to built a hyper graph , In Which each everyedge contains image as vertice to combine a particularvisual concept. The proposed hyper graph, the weight intwo vertices in a hyper edge is incorporated, and calculatedby their affection in the related visual concept. Rankingtechnique is proposed to figuer out the association scores ofimages and relevance of visual component by applying inputquery vectors to managed image retrieval[4].
6.The author introduced a probabilistic system to jointlyexploit 3 forms of relations that is follower relation, user listrelation, and list-list relation for finding experts. Specially,introduce a Semi-Supervised Graph-based Ranking approach(SSGR) to offline calculate the users global authority.In SSGR, employ a normalized Laplacian regularizationmethod to jointly find the 3 relations, which is related tothe supervised information obtain from Twitter. Then onlinecompute the local similarity between users and the givenquery. By using the global authority and local relevanceof users, here all users are rank and then find top usersaccordingly with highest ranking score[1].
7.The author address the large scale graph-based problemof ranking and focus on how to effectively use hugeheterogeneous information of the graph to increase theperformance of ranking. Specifically, introduced an methodand effective semi-supervised Page Rank (SSP) techniqueto parameterize the collected information in a unified semisupervised learning framework (SSLF-GR), then at the same time optimize the parameters and graph nodes rankingscores[2].

III. SYSTEM ARCHITECTURE / SYSTEM OVERVIEW

The given system, develop a Pairwise Learning aspect for ranking model which gives relevant answer to every question.Specifically, it has two aspectsi.e offline andonline search.

1. In the given offline Searching aspect, first of all there isset up of the neutral, positive, and negative training patterns in the form of desire pairs advised by data-driven set of results.
2.In the online searching aspect, given system first get set ofanswers for the given mentionedquestion by means of finding itscomparable or similar questions. We at that point divides the relevant answer by theoffline trained model to find the ranking sequence. Givensystem get question from user then choose same question for mentioned/entered query by using similarity of available question and then apply Pairwise learning which will processed further and within minimum time user will get answer and the most important relevancy of answer will be maintained. And system notify other users to answer the newly asked question that has no available answer in database. And this will reduce users waiting time to get correct answer.

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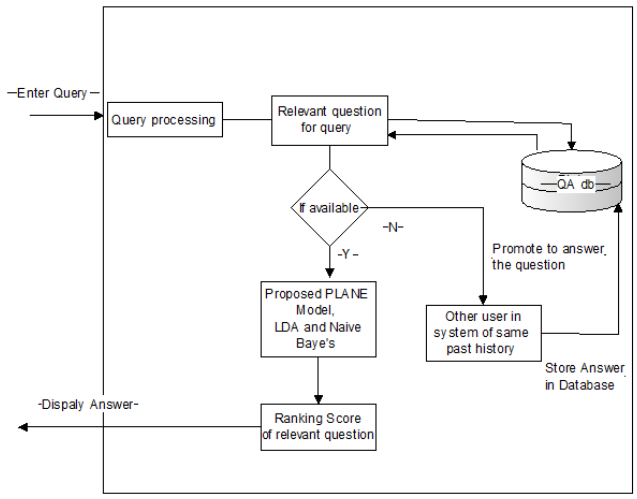

Fig. 1. Block diagram of given work

Notation:

S be the class of answer.

A11 =all similar question of q

Aji =be the j th answer of ith question q

a0 i =be the best answer

q=Entered question.

a1 be the votes of answer

Equation:

A11 =avg(feature (all matched question))————————(1)

Eq.1Gives similar question of entered question using synonym andLavenstine Distance Algorithm.

a0i =avg(a1,S)————————(2)

Eq.2 User gets correct answer by using Nave Bayes concept andvoting.

IV. SYSTEM ANALYSIS

Experimental evaluation is supposed to be done for comparing the givensystem with the existing system for evaluating the performance.

The simulation platform used is been built by using the Java framework(with version jdk1.7) on windows operating system. And the givensystem simply does't depend on any specific hardware to run, any standard system is capable of running the application.

Graph 1. gives no. of vote provided for each answer by the otheruser.

Graph 2.gives for every question total no.of relevant and irrelevant answers.

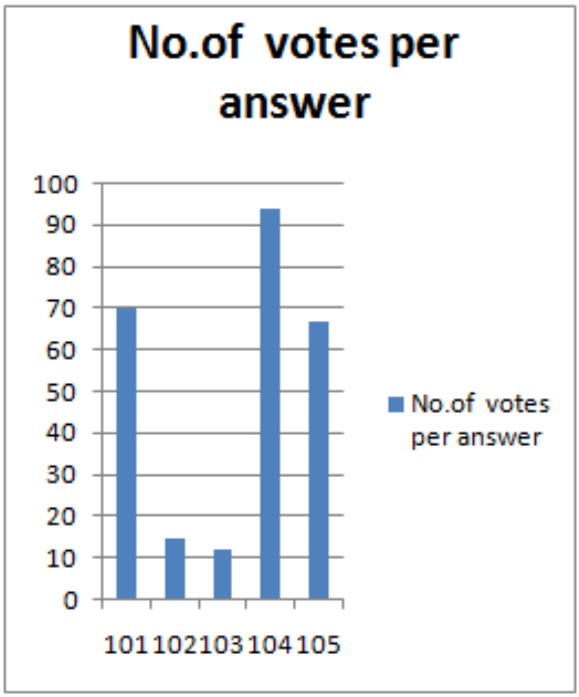

Fig. 2. Graph 1.X-Axis Answer of askedquestion and votes for that answers.

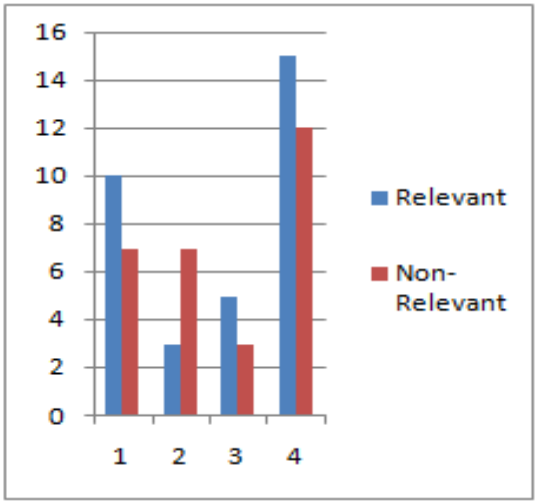

Fig. 3. Graph 2 Shows X-Axis Question id And on Y-axis total no. of relevantand irrelevant answers.

Table 1:shows number of votes for every answer

Sr.No.	No. of votes per question
101	70
102	15
103	12
104	94
105	67

Table 2:Givestotal no. of relevant and non-relevant answersfor each question.

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Question Id	Relevant	Non-relevant
1	10	7
2	3	7
3	5	3
4	15	12

V. CONCLUSION

We represent kind of system for getting relevant answers selectionin givencqasystem. And this contains online and the offline search aspect. In the online learning asepct, instead of waiting for long time givensystem will automatically develop neutral, positive and negative training patterns. Andin the online search aspect, for a specific asked question, system first of all collects a set of answers. And then classify correct answers through Pairwise technique comparison by using theoffline model. And with this an additional provision is a system notify other user to answer the newly asked question that has no available answerin database. And this will reduce users waiting time to get the correctanswer.

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