© 2018 IJSRST | Volume 4 | Issue 3 | Print ISSN : 2395-6011 | Online ISSN: 2395-602X

National Conference on Advances in Engineering and Applied Science (NCAEAS)
29th January 2018
Organized by : Anjuman College of Engineering and Technology (ACET) Nagpur, Maharashtra, India, In association with
International Journal of Scientific Research in Science and Technology

Ask Me Forum-Crowdsourcing

Prof. M. S. Khatib, Prof. NaishaTaban, Prof. Farheena Sheikh, IffatSaleha, Sana Khan
Computer Science And Engineering Department, ACET Sadar , Nagpur, Maharashtra, India

ABSTRACT

Today people use the Internet to find the answer totheir questions. They mostly rather ask other users onCommunity Question Answering (CQA) sites for an answer thanjust searching theweb. However, as Social Media becomes morepopular, users tend to ask their questions on these networks, andignore the benefits CQA sites offer. On the other hand, automaticQuestion Answering (QA) systems are unable to comprehendquestions including images and implementing necessaryalgorithms for such systems is expensive. In this paper, wepropose QA process based on Crowdsourcing, which runs on aQA open system. The system benefits from Crowdsourcingadvantages, besides automation techniques. The model isoperational and we have demonstrated that questions could bereceived from different heterogeneous sources, if the suitableprocedures are used, and that the answer is obtained from thecrowd in the proposed process based on Crowdsourcing.Moreover, the first Iranian crowdsourcing platform forcomplicated tasks is implemented, which could be used as a basisfor future research.

Keywords: Crowdsourcing; Web; Question Answering

I. INTRODUCTION

Internet users usually use search engines to find the answerto their questions. However, when they fail to transform theirneeds such as a short query, theyassume that they will not find the answer to their open questions, personal questions and the onesassociated with specific conditions into complicatedquestions by searching the webpages directly, and that a realhuman being would understand their problem much better thana machine. In these cases, users usually would prefer to asktheir questions on Community Question Answering (CQA)sites such as Yahoo! Answers, Quora and StackOverflow,rather than issuing a query to a Web search engine, this wayother users could provide the answer. Moreover, in order tofind the answer to a question in webpages using searchengines, the user must choose suitable keywords which notevery user is capable of.Increasing number of questioners in CQA and the fewaccounts providing answers, has led to an increase inunanswered questions. The results of a research done onYahoo! Answers show that 15 percent of all English questions,have remained unanswered and that 25 percent of the questionsin each category are repetitious[1]. Further, the percentage ofunanswered questions in Persian is higher, due to the shortageof Persian content on the internet. As Social Media becomesmore popular, people prefer asking their questions on thesenetworks instead of CQAs, because of the

benefits thesenetworks provide[2]. Therefore, they are unable to benefit fromthe advantages CQAs offer. Automatic QA systems aredeveloped to overcome the unanswered questions issue. Anautomatic QA system is a system which produces a suitableanswer for the received question and present it to thequestioner. Building such systems requires using complicated.

II. SYSTEM ARCHITECTURE

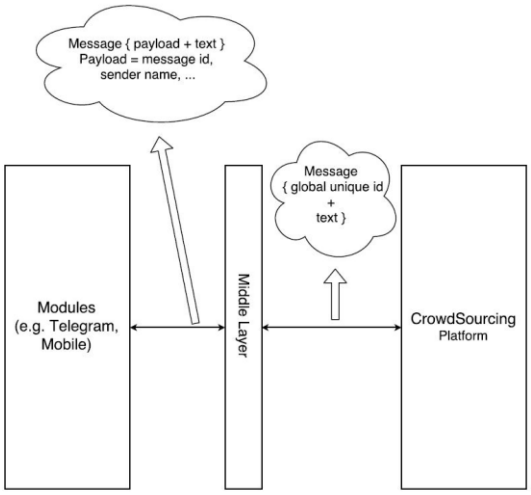

Figure 1. Architecture of the proposed system

cidentified as aquestion, simply because it contains a questionmark. After exploring questions asked inTelegram groups, we presumed that messages containing "explain" or "introduce" keywords and a question mark.

2) **Registering In The Middle Layer**

The role of middle layer is to eliminate the existingdependencybetween rowdsourcing and the sources providingquestions. To add a new source in order to collect questions ortesting new algorithms in identifying uestions, you are justrequired to develop a new independent module (using anyprogramming language and over any platform). All modulesmust be registered in middle layer and receive a uniqueidentifier.

Any module could send questions to the middle layerURL, using its unique identifier. Modules send question andadditional information (information needed for the module,e.g. requester's ID in Telegram) to the middle layer URLusing Json format, to be stored in the middle layer database.

3) **Question Tagging By Workers**

Since in this QA system, the priority of scalability is high,no restriction is considered for posting questions. For instance,if a requester had to declare the subject of question atsubmission time, then it was no longer possible to receivequestions from some social media networks such as Twitter,
which have a character limit.Yet, more information is required in order to organize
questions. With addition of tagging task to QA process,workers append metadata to the question. In this system,question's metadata include question difficulty, question tags.

III. METHOD

Here QA process is a set of operations and steps a questionhas to take through the proposed system, so that a final result is
produced and sent to the requester.

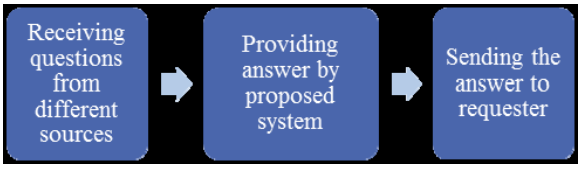

Figure 2. QA process in the proposed system

Figure 3. General QA process

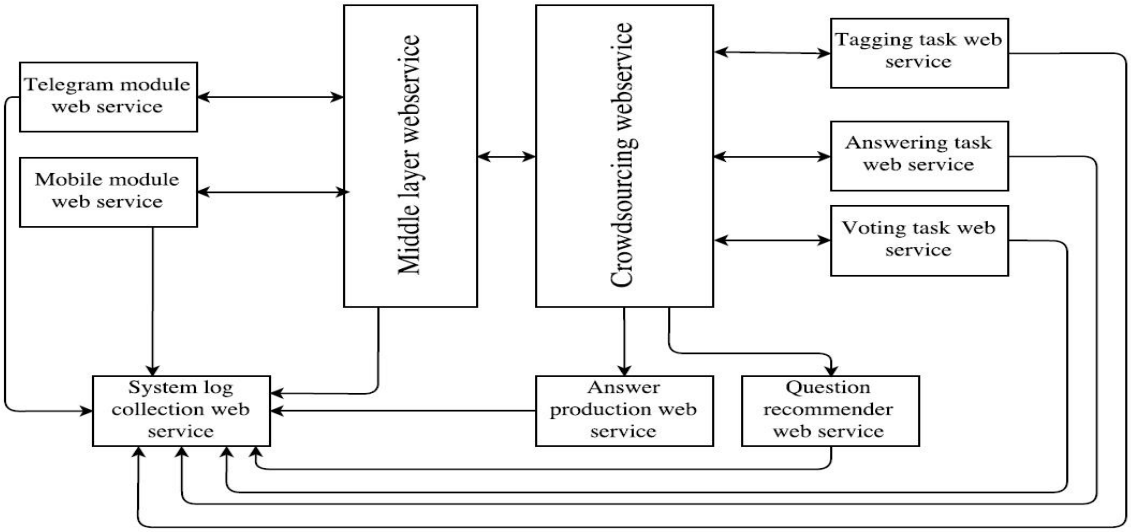

Figure 4. Web services of the proposed system

IV. CONCLUSION

This paper attempts to overcome the existing challenges incurrent QA systems, by exploiting crowdsourcing advantagesand automatic techniques. Here, we propose a QA systembased on crowdsourcing. The main purpose of this researchwas proposing a QA system, however it required acrowdsourcing platform. Since these platforms are onlydeveloped in other countries and they are not available forIranian researchers, we were compelled to develop a nativecrowdsourcing platform as a secondary purpose. Openness isthe most important characteristic of the proposed system. Thischaracteristic allows other researchers to investigate relatedsubjects in the future, without the need to implement a newQA system. They could also use the proposed system forevaluation purposes.

V. REFERENCES

[1]. A. Shtok, G. Dror, Y. Maarek, and I. Szpektor, "Learning from thePast: Answering New Questions with Past Answers," inProceedings of the 21st international conference on World WideWeb - WWW '12, 2012, p. 759.

[2]. K. Kim, S. Lee, J. Son, and M. Cha, "Finding informative Q&As ontwitter," in Proceedings of the 23rd International Conference onWorld Wide Web - WWW '14 Companion, 2014, pp. 319–320.

[3]. L. B. Chilton, G. Little, D. Edge, D. S. Weld, and J. A. Landay,"Cascade: Crowdsourcing Taxonomy Creation," in Proceedings ofthe SIGCHI Conference on Human Factors in Computing Systems -CHI '13, 2013, p. 1999.

[4]. G. Xintong, W. Hongzhi, Y. Song, and G. Hong, "Brief survey ofcrowdsourcing for data mining," Expert Syst. Appl., vol. 41, no. 17,pp. 7987–7994, Dec. 2014.

[5]. J. Hentschel and J. Pal, "Sada Vehra: a framework forcrowdsourcing Punjabi language content," in Proceedings of the Seventh International Conference on Information andCommunication

Technologies and Development - ICTD '15, 2015,pp. 1–4.

[6]. S.-K. Choi, J.-H. Shin, and Y.-G. Kim, "Semi-automatic Filtering ofTranslation Errors in Triangle Corpus."

[7]. L. Mitchell, S. O'Brien, and J. Roturier, "Quality evaluation incommunity post-editing," Mach. Transl., vol. 28, no. 3–4, pp. 237–262, Dec. 2014.

[8]. O. Alonso, D. E. Rose, and B. Stewart, "Crowdsourcing forrelevance evaluation," ACM SIGIR Forum, vol. 42, no. 2, p. 9, Nov.4192.

[9]. M.-C. Yuen, I. King, and K.-S. Leung, "A Survey of CrowdsourcingSystems," in 2011 IEEE Third Int'l Conference on Privacy,Security, Risk and Trust and 2011 IEEE Third Int'l Conference onSocial Computing, 2011, pp. 766–773.

[10]. D. Geiger and M. Schader, "Personalized task recommendation incrowdsourcing information systems — Current state of the art,"Decis. Support Syst., vol. 65, pp. 3–16, Sep. 2014.

[11]. A. Kittur, B. Smus, S. Khamkar, and R. E. Kraut, "CrowdForge:Crowdsourcing Complex Work," in Proceedings of the 24th annualACM symposium on User interface software and technology - UIST'11, 2011, p. 43.

[12]. D. Notkin, B. H. C. Cheng, K. Pohl, M. IEEE Computer Society.,and Institute of Electrical and Electronics Engineers., "Pricing crowdsourcing-basedsoftware development tasks," in Proceedingsof the 2013 International Conference on Software Engineering,2013, pp. 1205–1208.

[13]. J.-W. Jeong, M. R. Morris, J. Teevan, and D. Liebling, "A Crowd-Powered Socially Embedded Search Engine," in International AAAI Conference on Web and SocialMedia; SeventhInternational AAAI Conference on Weblogs and Social Media, 2013.

[14]. "Personalized task recommendation in crowdsourcing informationsystems — Current state of the art."

[15]. K. Mao, Y. Yang, Q. Wang, Y. Jia, and M. Harman, "DeveloperRecommendation for Crowdsourced Software Development Tasks,"in 2015 IEEE Symposium on Service-Oriented System Engineering,2015, pp. 347–356.

[16]. M. Allahbakhsh, B. Benatallah, A. Ignjatovic, H. R. Motahari-Nezhad, E. Bertino, and S. Dustdar, "Quality Control in Crowdsourcing Systems: Issues and Directions," IEEE InternetComput., vol. 17, no. 2, pp. 76–81, Mar. 2013.

[17]. B. Li, X. Si, M. R. Lyu, I. King, and E. Y. Chang, "Questionidentification on twitter," in Proceedings of the 20th ACMinternational conference on Information and knowledge management - CIKM '11, 2011, p. 2477.