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# Visual Potential Expert Prediction in Question and Answering Communities[☆]

Xiaoxiao Xiong[a], Min Fu[a], Min Zhu[a,*], Jing Liang[a]

[a]*Sichuan University, Chengdu, China*

**Abstract**

The success of Question and Answering (Q&A) communities mainly depends on the contribution of experts. However, there is a bottleneck for machine to identify these experts as soon as they participate in a community due to lack of enough activities during users' early participation. To tackle that, we bring human's business experience to potential expert prediction by combining machine learning and visual analytics. In this work, we propose a visual analytics system to identify potential experts semi-automatically. After the machine learning algorithm gives the result of the expert probability, analysts can locate a set of *interested users* whose expert probability is ambiguous and check the user information and behavior patterns of those users via the design of multi-dimension data visualization. Finally, our system models analysts' knowledge of the community members' identities, and then abstracts the knowledge quantificationally for machine learning algorithm. Thus, analysts can modify machine learning algorithm and the prediction process smoothly. A quantitative evaluation with real data has been studied to demonstrate the effectiveness of our system.

*Keywords:* Question and answering communities, potential experts prediction, interactive machine learning, visual analysis

[☆]Xiaoxiao Xiong and Min Fu contributed equally to this work and should be considered co-first authors.

[*]Corresponding author: **zhumin@scu.edu.cn** (Min Zhu)

*Email addresses:* xiongxxg@gmail.com (Xiaoxiao Xiong), 429842476@qq.com (Min Fu), jing.liang@scuvis.org (Jing Liang)



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