Improving Question Answering by Combining Multiple Systems via Answer Validation

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Abstract. Nowadays there exist several kinds of question answering systems. According to recent evaluation results, most of these systems are complementary (i.e., each one is better than the others in answering some specific type of questions). This fact indicates that a pertinent combination of various systems may allow improving the best individual result. This paper focuses on this problem. It proposes using an answer validation method to handle this combination. The main advantage of this approach is that it does not rely on internal system's features nor depend on external answer's redundancies. Experimental results confirm the appropriateness of our proposal. They mainly show that it outperforms individual system's results as well as the precision obtained by a redundancy-based combination strategy.

1 Introduction

Question Answering (QA) systems are a kind of search engines that allow responding to questions written in unrestricted natural language. Different to traditional IR systems that focus on finding relevant documents for general user queries, this kind of systems are especially suited to resolve very specific information needs.

Currently, given the great number of its potential applications, QA has become a promising research field. As a result, several QA methods have been developed and different evaluation forums have emerged (such as those at TREC[3] and CLEF[4]). Latest results from these forums evidenced two important facts about the state of the art in QA. On the one hand, they indicated that it already does not exist any method capable of answering all types of questions with

[3] Text REtrieval Conference. http://trec.nist.gov/
[4] Cross Language Evaluation Forum. http://www.clef-campaign.org/