Question Retrieval in Community Question Answering Enhanced by Tags Information in a Deep Neural Network Framework
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Abstract

Community Question Answering (CQA) platforms need to be easy and fast in question or answer exploration. It is common to use tags to categorize items in these platforms, and create taxonomies that assist exploration, indexing and searching. The focus of this thesis lies in recommending similar questions (Question Retrieval) by simultaneously deciding whether the contexts of two questions are similar, and which tags are applicable for each question. Current methods targeted for Question Retrieval in CQA either consider deep learning approaches (Lei et. al. 2016, Bogdanova et al. 2015), or conventional approaches that utilize the available information on questions' tags (Cao et. al. 2010, Zhou et al. 2013). The former framework is proved to be more powerful “especially in the case with loads of available data”, while the later is faster and successful in cases with few data. In this thesis, a deep learning approach for both question retrieval and tags recommendation is proposed, and their joint learning is found successful for transferring knowledge in the Question Retrieval task, after applying it on the AskUbuntu forum data. Additionally the neural network based Tag Recommendation performs better than the existing conventional methods.

References:

Dasha Bogdanova, Cicero Nogueira dos Santos, Luciano Barbosa, and Bianca Zadrozny. Detecting semantically equivalent questions in online user forums. In CoNLL, 2015.

