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Lexical Based Method for Opinion Detection on Tripadvisor Collection

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Abstract : The massive development of online social networks allows users to post and share their opinions on various topics. With this huge volume of opinion, it is interesting to extract and interpret these information for different domains, e.g., product and service benchmarking, politic, system of recommendation. This is why opinion detection is one of the most important research tasks. It consists on differentiating between opinion data and factual data. The difficulty of this task is to determine an approach which returns opinionated document. Generally, there are two approaches used for opinion detection i.e. Lexical based approaches and Machine Learning based approaches. In Lexical based approaches, a dictionary of sentimental words is used, words are associated with weights. The opinion score of document is derived by the occurrence of words from this dictionary. In Machine learning approaches, usually a classifier is trained using a set of annotated document containing sentiment, and features such as n-grams of words, part-of-speech tags, and logical forms. Majority of these works are based on documents text to determine opinion score but dont take into account if these texts are really correct. Thus, it is interesting to exploit other information to improve opinion detection. In our work, we will develop a new way to consider the opinion score. We introduce the notion of trust score. We determine opinionated documents but also if these opinions are really trustable information in relation with topics. For that we use lexical SentiWordNet to calculate opinion and trust scores, we compute different features about users like (numbers of their comments, numbers of their useful comments, Average useful review). After that, we combine opinion score and trust score to obtain a final score. We applied our method to detect trust opinions in TRIPADVISOR collection. Our experimental results report that the combination between opinion score and trust score improves opinion detection.

Keywords : Tripadvisor, opinion detection, SentiWordNet, trust score
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