Text and Social-enhanced Business Recommendation
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Abstract

Recommender systems are a very popular field of study both in academia and industry. These systems usually rely on user product ratings to make their personalized predictions. However, platforms on which recommendation is applicable often have additional contextual information that can be useful for improving recommendation. Such information may include social structures which users are part of, or text information expressing the opinion of the users. In this work we leverage this additional information in order investigate the impact that social circles and natural language that expresses users' opinions have on the recommendation scenario. This research question has been addressed before using social information and language processing on facets separately. We combine these two facets to improve an automated recommender system. More specifically the dataset selected blends two aspects that have been researched on separately, social networks and text analysis. We extract features from these two facets and apply state-of-the-art machine learning algorithms that use these features to improve recommendation. We evaluate our method on a dataset of a commercial business rating platform. This thesis combines the insights gained by observing raw mathematical rating observations with the wisdom of the crowds as weighed and reconstructed by analyzing the dynamics of social networking and information extracted from analysis of textual information via topic modeling and other methods. The experimental results demonstrate the effectiveness of our methods and show an improvement over the baselines when using both the facets in a hybrid method.