Profiling reviewers' social network strength and predicting the "Helpfulness" of online customer review

ABSTRACT

Online customer reviews have become a popular source of information that influences the purchasing decisions of many prospective customers. However, the rapidly increasing volume of online reviews presents a problem of information overload, which makes it difficult for customers to determine the quality of the reviews. This study defines the helpfulness of the reviews as a count variable and takes the review helpfulness prediction from both regression and classification perspectives. The influence of friends and followers on review helpfulness is examined by introducing Social Network Strength (SNS) features. Furthermore, the performance of Machine Learning (ML) algorithms and the importance of features are separately examined for both problems using different time span of reviews. The evaluation performed using a dataset of 90,671 Yelp shopping reviews demonstrates the effectiveness of the proposed approach. The findings of this study have important theoretical and practical implications for researchers, businesses, reviewers and review platforms.