Collaborative Filtering Similarity Measures: Revisiting

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ABSTRACT

This paper discussed the most commonly used similarity measures in **C**ollaborative **F**iltering (CF) recommender system. In addition, the author introduced some recommendations related to CF system quality improvement which should be considered in the process of formulating similarity measure that may lead to alleviating the issue of data sparsity and some existing measures shortcomings. Generally, CF approach is one of the most widely used and most successful methods for the recommendation system, such as e-commerce. CF system introduced items to the user based on his/her previous ratings and the ratings of his/her neighbors. Therefore, the most important stage in CF system is locating the successful neighbor. Nevertheless, the sparsity of data is the major issue faced by the memory-based CF. The reason behind this is that many of the users rated a few number of items from the huge number of available items. This has encouraged many researchers to provide solutions. One of these solutions was by proposing or updating similarities measures take in considerations the global information preference, all ratings provided by users, the size of common ratings, and so on. In this work, the researcher discussed these measures alongside with their limitations. In addition, the researcher also listed some advices that are important in the process of locating successful neighbors, which may help researchers to improve the quality of CF system.

CCS Concepts

Information systems→ World Wide Web→ Web searching and information discovery → Collaborative filtering.

Keywords

Recommendation System; Collaborative Filtering; Similarity Measurer.

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