

عنوان مقاله:

DBCACF: A Multidimensional Method for Tourist Recommendation Based on Users Demographic, Context and Feedback

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خلاصه مقاله:

By the advent of applications in the web 2.0 such as social networks which allow the users to share media, numerous opportunities have been provided for the tourists to recognize and visit attractive and unfamiliar Areas-of-Interest (AOIs); however, finding the appropriate areas based on user's preferences is very difficult due to several issues such as huge amount of tourist areas, the limitation of the visiting time, etc. In addition, the available methods have yet failed to provide accurate tourist's recommendations based on geo-tagged media because of several problems such as considering two users with different habits as the same, and ignoring user's information. Therefore, in this paper, a method called Demographic-Based Context-Aware Collaborative Filtering (DBCACF) is proposed to investigate the mentioned problems. DBCACF considers personal and side information in combination with the users feedbacks to overcome the limitations of collaborative filtering methods in dealing with multi-dimensional data. In addition, a new asymmetric similarity measure is proposed in order to overcome the limitations of symmetric similarity methods. The experimental results on Flickr dataset indicated that the use of personal and side information and the addition of proposed asymmetric scheme to the similarity measure could significantly improve the obtained results compared to other methods which used only user-item ratings and symmetric measures. In particular, our method based on the Cosine similarity measurement has provided a better performance (0.34 for Precision and 0.38 for F-score) as compared to our method based on the Pearson similarity measure over data sparsity and cold-start problems.

کلمات کلیدی:

.Decision Support Systems; Data Mining; Context-aware Recommendation; Geo-tagged Photo; Asymmetric Similarity

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