

移动通信网中基于用户社会化关系挖掘的协同过滤算法

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A Collaborative Filtering Algorithm Based on Users' Social Relationship Mining in Mobile Communication Network

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摘要

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摘要 该文面对移动通信网中个性化服务推荐问题, 结合社会化网络分析方法提出一种基于移动用户社会化关系挖掘的协同过滤算法。利用移动通信网中所形成社会化网络, 预测潜在的社会化网络关系, 并按关系紧密程度找到相似用户; 然后结合基于用户评分相似度计算发现的最近邻用户, 找到最相似的用户集合, 进行移动用户偏好预测和推荐, 有效地缓解数据稀疏性。仿真数据集和公开数据集实验表明了该算法在预测移动用户偏好和提高推荐精确度方面的可行性和有效性。

关键词: 移动通信网 移动社会化网络 偏好预测 协同过滤

Abstract: To solve the personalized information content and services recommended issues in mobile communication network, a collaborative filtering algorithm based on users' social relationship mining in mobile communication network is proposed with the social network analysis method. It effectively mitigates data sparsely for preferred forecasting and recommendations by using the information of social networks obtained from predicting the potential relationship between social networks and the most similar set of users according to the degree of similar relationship between the users. The algorithm is proved more accurate and feasible in the experiments by using the public data sets and the simulated data sets.

Keywords: Mobile communication network Mobile social network Preference prediction Collaborative filtering

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