融合可信度和时效标签的商品推荐算法

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摘　要：为了提高电子商务推荐系统的性能，提出了考虑可信度的基于时效性的用户-项目-属性-标签四部图模型，并针对该模型提出了一种新的推荐算法——融合可信度和时效标签的商品推荐算法.该模型算法改善新项目的冷启动问题；提出了基于评分信息的、基于项目属性的和基于用户时效标签的 3 种个性化预测评分方法，将这 3 种评估方法融合，通过调节参数α，β和γ平衡因子，判断这 3 种评估方法的影响因素权值，从而提高推荐的准确度.结果表明该推荐算法既有较高的准确度，也有较高的新颖度，并且在某种程度上有效地处理了新项目推荐的冷启动问题.

关键词：关键字：推荐系统；冷启动；可信度；时效标签；四部图

Goods Recommendation Fusing Credibility and Timeliness-tag

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Abstract：To solve improve the performance of e-commerce recommendation system,considering four graph model of credibility based on the user - projects - property - label of timeliness is proposed,And this paper proposes also a new recommendation algorithm-Goods Recommendation Fusing Credibility and Timeliness-tag(CRFCT) for the model.The model algorithm using reliability model judges user type to improve the cold start of the new project.3 kinds of personalized prediction scoring methods are proposed based on rating information and the attributes of the project and user timeliness method,incorporating the three evaluation methods,by adjusting the parameters of alpha, beta, and gamma balance factor to determine the weights of influence factors of the three evaluation methods, so as to improve the accuracy of recommendation.Experimenting show that has higher accuracy and also has higher novelty, and to some extent effective to deal with the cold start problem of the new project recommendation compared with the traditional recommendation algorithm.

Key words：recommendation system; cold start; credibility; timeliness-tag ;four graph

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