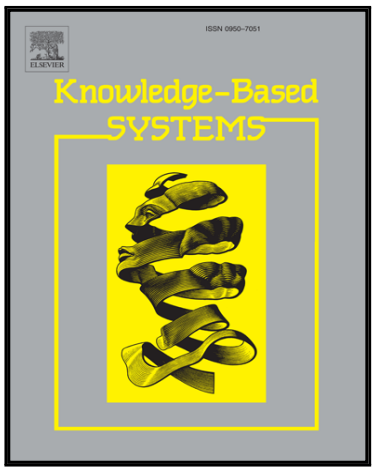

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APRA: An Approximate Parallel Recommendation Algorithm for Big Data

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Abstract

Finding relevant and interesting items according to the preferences of each user has become an important challenge in the era of Big Data. Recommender systems have emerged in response to this problem. Collaborative Filtering (CF) is one of the most successful recommender systems used by several big online shopping companies. However, CF is computationally demanding, especially in Big Data context, where the number of users and items are too big to be effectively processed by traditional approaches.

In this paper, we propose a new solution based on Spark, which is tailored to handle large-scale data and provide better results. Particularly, we take advantage of the in-memory operations available through Spark, to improve the performance of recommendation systems in context of Big Data. Experimental results on two real-world data sets confirm the claim.

Keywords: Recommender system, Big Data, Apache Hadoop, Apache Spark, Collaborative filtering

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