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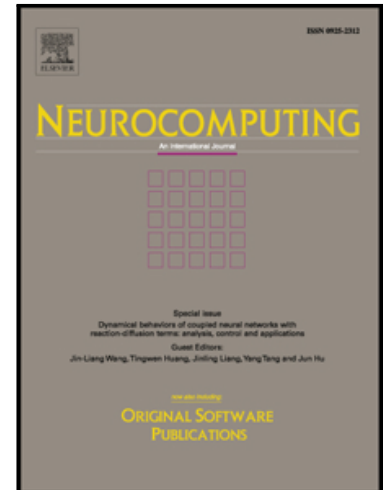
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An Improved Recommendation Algorithm for Big data Cloud Service based on the Trust in Sociology

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SUMMARY

Personal recommendation technology is becoming a useful and popular solution to solve the problem of information overload with the popularity of big data cloud services. But most recommendation algorithms pay too much attention to the similarity to focus on the social trust between users. So this paper focus on the research of hybrid Recommendation algorithm for big data based on the optimization combining with the similarity and trust in sociology. In this paper, we introduced some user trust models including trust path model and loop trust model, and then we took these models into the calculation of mixed weighting. The experiment results show that the recommendation algorithm considering the trust models has the higher accuracy than the traditional recommendation algorithm, and we have a 2% increase in both MEA (Mean Absolute Error) and RMSE (Root Mean Square Error).

KEYWORDS: Recommendation technology, trust model, similarity, big data, hybrid recommendation

1 INTRODUCTION

With the continuous development of network technology, users can gain amounts of information by many different paths, especially in recent years, the entire internet data size is being in exponential growth. A recent research report shows that 95% of the data generated by the entire human civilization is generated in past 6 years [1]. So we have entered the age of big data.

Big data is the massive data generated by the rapid development of the human modern society; it is also a research hot spot in academic and industry for its great application prospects. In fact, the big data is also changing the way of our life and work, the big data cloud service can make it easy for users to gain the big data at any time and place with a simple Information and communication equipment.

These big data can provide users with a lot of convenience in their daily life and work, but it also causes some problems. The rapid growth of data make users submerged in the sea of the big data, many users have to waste much unnecessary time to find the useful information which is called the problem of information overload. To solve the problem which exacerbated by big data, personal recommendation technology has been a popular research direction in recent years.

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