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An improved Apriori algorithm for mining large datasets

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Association rules mining (ARM) is the main technique to determine the frequent itemset in data mining. Apriori algorithm is a classical algorithm for mining association rules, which enumerate all of the frequent item sets. But when this algorithm is used on a large volume of data, its performance declines due to so many scans of the database and its attendant cost on the system. In order to extract more rules in valuable time, this research proposes an improvement over the classical Apriori algorithm. It trims transaction records based on items of interest; this saves time by reducing the number of database scans. Finally, the improved algorithm is verified and the results show that the improved algorithm scales better than the original Apriori algorithm. The results of the comparison shows that the time the improved algorithm uses to extract the association rules is shorter than the time taken by the original algorithm, this makes the improved algorithm faster than the original algorithm and is reasonable and more effective in extracting more valuable information from datasets.

Biography

Adewole A P is working as a Senior Lecturer in the Department of Computer Sciences, Faculty of Science, University of Lagos, Nigeria. He is a member of Nigeria Computer society (NCS), a member of Computer Professional of Nigeria (CPN) and a member Association for Computing Machinery (ACM). He has total teaching experience of 15 years in the University. He has a total of 32 research papers published in national / international journals / conferences into his credit. His main research interests are big data and data mining, database system, artificial neural network and computer graphics. He has attended several conferences both locally and internationally.

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