

## ASSOCIATION RULE MINING FOR DIFFERENT MINIMUM SUPPORT

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### ABSTRACT

In this paper, we describe the Data Mining and Association Rule Mining concepts. Data mining is classified as a knowledge discovery process that is specifically used to analyze data from the different mining principles and perspectives and combine it into a powerful tool that is used to pool this information to increase revenue in its totality and boost the general output of organizations.

One such principal of the data mining concept is the Association Rule Mining, which finds the entire rule that exists in the database which will satisfy an amalgamation of some minimum support and minimum confidence constraints. Although the target of discovery isn't pre-determined, this type of rule satisfies the Minsup (Minimum Support) and Minconf (Minimum confidence) controls which assumes every item in the data will behave in the same nature and will possess similar patterns in its frequencies in its data. Branching out further, the Minsup will control the absolute minimum amount of data that it has to cover for the rule while the Minconf will regulate predictive analytics of the rule.

However these might not be a real-time scenario as in most applications, the items will rarely appear in some instances and would appear in an infrequent pattern in others in the data. So if the Minsup is set to a very high state, those rare items that these are rules are involved in will not be found. This in turn will cause a combinatorial explosion as the frequent items will be caught entangled with each other in all possible ways and outcomes.

We're going to introduce a niche technique to absolve of this issue as this specific technique will allow the user to quantify multiple Minsup so that it may reflect the true natures of its items and their own variance of frequencies found in the database.

**KEYWORDS:** CBA-RG Algorithm, Closure Property, MTS