

## Improved FP-Growth Algorithm with Multiple Minimum Supports Using Maximum Constraints

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**Abstract :** Association rule mining is one of the most important fields of data mining and knowledge discovery. In this paper, we propose an efficient multiple support frequent pattern growth algorithm which we called "MSFP-growth" that enhancing the FP-growth algorithm by making infrequent child node pruning step with multiple minimum support using maximum constraints. The algorithm is implemented, and it is compared with other common algorithms: Apriori-multiple minimum supports using maximum constraints and FP-growth. The experimental results show that the rule mining from the proposed algorithm are interesting and our algorithm achieved better performance than other algorithms without scarifying the accuracy.

**Keywords :** association rules, FP-growth, multiple minimum supports, Weka tool

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