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Frequent Pattern Associative Rules in Multiple Dimensions

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Abstract: This paper explores frequent pattern mining in multidimensional data and its extension beyond traditional one-dimensional approaches. While association rule mining is widely used in market basket analysis, its application to multidimensional datasets presents new challenges due to the increased complexity and sparsity of the data. This research reviews existing multidimensional mining techniques, focusing on frequent pattern associative rules, and evaluates their performance. Several real-world applications, such as business intelligence, healthcare analytics, and sensor networks, are discussed. The paper also proposes a framework for efficient pattern discovery and suggests areas for future research.

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Keywords: market basket analysis, multidimensional data, association rule mining

