ANALYSIS OF PURCHASE PATTERNS USING APRIORI ALGORITHM IN SALES TRANSACTIONS

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ABSTRACT

Sales transactions are something that every store that sells goods must-have. Most sales transaction data is only left as an archive and only used as a sales report. Data mining is a technique of extracting data that can be used in managing the sales transaction data of a store. Using data mining techniques, sales association rules that were previously only left as archives can be extracted and processed into information used in decision making. The Apriori algorithm is a data mining technique looking for association rules or data sets that can be applied to extract information from sales transaction data. Based on this incident, the author applies the analysis of buying patterns using the Apriori algorithm on sales transactions. The system built in the form of a website-based application that can perform Apriori calculations will produce a combination of goods purchased together. The data is taken from the Kaggle.com site with a .csv file extension in the form of sales transaction data. The data was selected and preprocessed the data and obtained data with 56 transactions, 24 items, and 124 rows. The resulting itemsets are 1 and 2 product items with minimum support of 5% and 70% confidence. The results obtained are 4 association rules of 2 combination items including {coffee => alfajores} with 100% confidence, {bread => pastry} with 80% confidence, {bread => hot chocolate} with 75% confidence, and {coffee = > hot chocolate} with 75% confidence. The combination of goods resulting from this Apriori calculation can reference sales strategies to increase store sales.
Keywords*: Data Mining, Apriori Algorithm, Association Rules, Sales Transactions*