

ABSTRACT

IMPLEMENTATION OF THE APRIORI ALGORITHM IN A LARAVEL BASED POINT OF SALE APPLICATION FOT ANALYZING PURCHASING PATTERNS OF SEHATEA MSME

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The development of information technology has had a significant impact on the micro, small, and medium enterprises (MSMEs) sector, especially in managing transaction data. However, many MSMEs still face challenges in analyzing customer purchasing patterns, which can support marketing strategies and decision making. This study aims to develop a Laravel-based Point of Sale (POS) application that integrates the Apriori algorithm to identify purchasing patterns from MSME transaction data. The Apriori algorithm is a data mining technique used to find association patterns in a dataset, which allows MSMEs to optimize their marketing strategies based on customer purchasing trends. This study was applied to Sehatea, an MSME engaged in the beverage sales industry. The research findings show that the implementation of the Apriori algorithm in a Laravel-based POS application makes it easier to identify frequent purchasing patterns, such as items that are often purchased together by customers. In addition, this application not only simplifies transaction management but also provides data-based insights that can be used to improve promotional effectiveness, such as product bundling strategies and purchase recommendations. Thus, the application of Apriori-based purchasing pattern analysis in the POS system can help MSMEs develop more targeted marketing strategies and increase their business competitiveness.

Keywords: UMKM, Apriori algorithm, purchasing patterns, POS applications, Laravel, marketing strategies.



