

PENERAPAN ALGORITMA *FP-GROWTH* DALAM MENGANALISIS DATA PENJUALAN

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ABSTRAK

Toko Najwa merupakan toko pakaian yang menjual berbagai macam busana muslim khususnya, terletak di Kabupaten Cirebon, Jawa Barat. Toko Najwa memiliki permasalahan berupa terjadinya peningkatan pesat penjualan pada bulan tertentu. Hal tersebut menyebabkan ketidakstabilan pendapatan, serta pemborosan produk yang tidak sesuai dengan kebutuhan konsumen pada Toko Najwa. Menangani permasalahan tersebut, digunakan aturan asosiasi pada penelitian ini. Aturan asosiasi digunakan untuk mengetahui pola asosiasi pembelian pelanggan. Algoritma yang diterapkan adalah *FP-Growth* untuk menganalisis data penjualan pada periode tahun 2022. Data transaksi diolah menggunakan *FP-Growth* dengan aturan minimal *support* 1% dan minimal *confidence* 35% menggunakan perangkat lunak *RapidMiner* versi 10.1. Hasil analisis adalah pola asosiasi yang menggambarkan hubungan antara produk yang kerap dibeli bersamaan dalam transaksi. Penelitian menunjukkan keberhasilan *FP-Growth* dalam mengidentifikasi pola pembelian dan hubungan antar produk di Toko Najwa. Diharapkan dapat membantu Toko Najwa mengetahui pola pembelian pelanggan, sehingga mengatasi ketidakstabilan hasil penjualan, serta membantu menangani persediaan produk.

Kata kunci: Aturan Asosiasi, *FP-Growth*, *RapidMiner*, Transaksi, Pakaian Muslim.

**APPLICATION OF THE FP-GROWTH ALGORITHM
IN ANALYZING SALES DATA**

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ABSTRACT

Najwa Store is a clothing store that sells various kinds of Muslim clothing. It is in Cirebon Regency, West Java. Najwa Store has a problem in the form of a rapid increase in sales in a certain month. This leads to income instability as well as the wastage of products that do not match the needs of consumers at Najwa Store. To deal with these problems, association rules were used in this study. Association rules are used to determine the association of the relationship between the time of purchase, in this case, the month of purchase, and the product purchased. The algorithm applied is FP-Growth to analyze sales data for the 2022 period. Transaction data is processed using FP-Growth with a minimum support rule of 1% and a minimum confidence of 35% using RapidMiner software version 10.1. The results of the analysis are association patterns that describe the relationship between products that are often purchased together in transactions. Research shows the success of FP-Growth in identifying purchasing patterns and relationships between products at the Najwa Store. It is hoped that it can help Toko Najwa understand customer purchasing patterns, thereby overcoming instability in sales results, as well as helping handle product inventory.

Keywords: *Association Rules, FP-Growth, RapidMiner, Transaction, Muslim Clothing.*