

**PENERAPAN ALGORITMA *FP-GROWTH* UNTUK MENGANALISA POLA
PEMBELIAN KONSUMEN PADA DATA TRANSAKSI PENJUALAN TOKO
DELIMA JAYA**

Lutvi Lestari¹, Daryanto², Amalina Maryam Zakiyyah³,
Program Studi Teknik Informatika, Fakultas Teknik
Universitas Muhammadiyah Jember
e-mail: lutvi.lestari1907@gmail.com

ABSTRAK

Toko Delima Jaya merupakan sebuah toko yang berada di bidang penjualan barang seperti kosmetik dan peralatan rumah tangga. Permasalahan yang terjadi pada toko Delima Jaya yaitu terjadinya kekurangan di suatu produk dan kelebihan di produk yang lain, oleh sebab itu toko harus mencari keputusan dengan melihat produk yang penjualan paling tinggi untuk mengelola barang yang dijual secara optimal, agar karyawan dapat melayani konsumen dengan mudah sesuai pola pembelian konsumen. Dengan metode *association rule* dapat membantu toko untuk mengetahui berapa *rule* yang dihasilkan dengan menggunakan batasan *minimum support* dan *minimum confidence* untuk rekomendasi produk. Algoritma *FP-Growth* merupakan algoritma yang efektif dalam pencarian *frequent itemset* dalam sebuah kumpulan data dengan membangkitkan struktur *FP-Tree*. Hasil perhitungan dari 623 data transaksi penjualan pada tahun 2020 dengan *minimum support* 5%, 10%, 20% dan *minimum confidence* 10%, 15%, 20%. Ditemukan 9 *rule* pada *minimum support* 5% dan *minimum confidence* 10%, sedangkan ditemukan 3 *rule* pada *minimum support* 10% dan *minimum confidence* 15%, dan ditemukan 3 *rule* pada *minimum support* 10% dan *minimum confidence* 20%. Sedangkan *rule* tidak ditemukan pada *minimum support* 20% dan *minimum confidence* 20% di karenakan item yang memenuhi *minimum support* 20% hanya 3 item.

Kata Kunci: rekomendasi produk, *Association rule*, Algoritma *FP-Growth*

IMPLEMENTATION OF FP-GROWTH ALGORITHM TO ANALYSIS PURCHASE OF CONSUMERS IN SALES TRANSACTION DATA AT DELIMA JAYA STORE

Lutvi Lestari¹, Daryanto², Amalina Maryam Zakiyyah³,
Informatics Engineering Study Program, faculty of Engineering
University of Muhammadiyah Jember
e-mail: lutvi.lestari1907@gmail.com

ABSTRACT

Delima Jaya Store is a shop that sell goods such as cosmetics and household appliances. The problem that occurs at Delima Jaya store is the occurrence of deficiencies in one product and advantages in other products, therefore, the store could look for decisions by looking at the highest selling products to manage the goods sold optimally, meanwhile that employees could easily serve consumers accordingly consumer purchasing patterns. With the association rule method, it can help a shop to find out how many rules are generated by using the minimum limit of support and minimum confidence for product recommendations. The FP-Growth algorithm is an effective algorithm in searching for frequent itemsets in a data set by generating the FP-Tree structure. Calculation results from 623 sales transaction data in 2020 with a minimum support of 5%, 10%, 20% and a minimum confidence of 10%, 15%, 20%. Found 9 rules at a minimum support of 5% and a minimum confidence of 10%, while 3 rules were found at a minimum support of 10% and a minimum confidence of 15%, and 3 rules were found at a minimum support of 10% and a minimum confidence of 20%. While the rule is not find at a minimum support of 20% and a minimum confidence of 20% meanwhile the items that found the 20% minimum support are only 3 items.

Keywords: product recommendation, Association rule, FP-Growth Algorithm