

ABSTRACT

PRODUCT LAYOUT RECOMMENDATION BASED ON CUSTOMER BEHAVIOR WITH MARKET BASKET ANALYSIS USING FP-GROWTH ON TOKOPEDIA

By

Muhammad Aunillah Alghifari

20102265

The development of the e-commerce industry requires business actors to understand consumer purchasing patterns to increase customer satisfaction. One method that can be used to understand consumer patterns is Market Basket Analysis (MBA). This MBA can produce association rules that show the relationship between products that are often purchased together. This research implements MBA with the FP-Growth algorithm to recommend products and item layouts in e-commerce, namely Tokopedia. From this research, 26 association rules were found that had strong relationships. Even though the support value found for each rule is small, ranging from 0.006035 to 0.008357 of the total occurrences in the dataset, other metrics can be used as parameters that the rule found is a strong rule, namely the confidence and lift ratio metrics. The highest confidence value for one of the rules is 0.92. Meanwhile, the lift ratio value found in each rule has a value of more than 1. The results of this analysis were implemented on the Tokopedia main page mockup by sorting the largest metric values and selecting the top 10 rules. These rules are the relationship between (Xbox) and (PlayStation CD), (Xbox) and (Game Console Casing & Silicone), (Xbox) and (PlayStation) and 7 other rules. Thus, the rules implemented on the main page mockup are strong rules so there is potential for developing a more effective sales strategy on Tokopedia.

Keyword: *Bigdata, Customer Behavior, FP-Growth, Market Basket Analysis, Product Lay-out*