JITEEHA: Journal of Information Technology Application in Education, Economy, Health and Agriculture
Vol. 02, No. 03, October 2025, pp. 87~94, e-ISSN: 3090-3939
https://journal.iteeacademy.org/index.php/jiteeha/

Application of Data Mining with Apriori Algorithm on Furniture Sales to Support Business Intelligence

Mochammad Syamsudin[1], Novi Dian Nathasia[2], Shaifany Fatriana Kadir[3]
[1]Department of Informatics Engineering, University of Widyagama Malang, Jl. Borobudur No. 35 Malang, Indonesia
[2]Magister Program of Information Technology, Universitas Nasional, Jl. Sawo Manila No. 61 Pejaten, Jakarta Selatan, Indonesia
[3]Department of Digital Business, University of Widyagama Malang, Jl. Borobudur No. 35 Malang, Indonesia

Article Info

Article history:

Received August 15, 2025
Revised September 20, 2025
Accepted October 05, 2025

Keywords:

Data Mining
Apriori Algorithm
Furniture Sales
Business Intelligence
Purchase Pattern
Business Strategy

ABSTRACT

This study explores the application of Data Mining using the Apriori algorithm in furniture sales to support Business Intelligence. The research process includes collecting weekly transaction data, forming frequent itemsets, analyzing association rules using metrics such as support, confidence, and lift, and integrating the results into business strategies. The findings indicate that tables, wardrobes, and bookshelves have the highest purchase rates at 100%, followed by cabinets at 83.33%, chairs at 91.67%, and sofas at 66.67%. Strongly associated itemsets, such as {Table, Bookshelf} and {Wardrobe, Cabinet}, provide valuable insights for business owners in designing marketing strategies, maintaining stock availability, and enhancing customer satisfaction. Utilizing the Apriori algorithm, this study successfully identifies significant purchasing patterns that can be used to drive sustainable business growth in the furniture industry.

Corresponding Author:

Mochammad Syamsudin
Department of Informatics Engineering
Faculty of Engineering, University of Widyagama Malang
Jl. Borobudur No. 35 Malang, Jawa Timur
Email: samsonudin230@gmail.com

1. INTRODUCTION

In the increasingly developing digital era, data utilization is one of the keys to success in business decision making. The furniture industry, as one of the sectors with tight competition, requires a data-based approach to optimize its sales strategy[1][2]. Data mining, especially with the Apriori algorithm, offers a solution to identify customer purchasing patterns that can be used to support the implementation of business intelligence. With this algorithm, analysis of relationships between products can be carried out effectively to find itemsets that are often purchased together, so that they can be used to design more targeted promotions, arrange strategic product layouts, and increase customer satisfaction. This study aims to apply the Apriori algorithm in the analysis of furniture sales data to provide strategic insights for business actors in making more effective decisions.

Data Mining is the process of exploring and analyzing large amounts of data to find patterns, relationships, or valuable information[3][4][5]. This process is often likened to gold mining, where the existing data is likened to a mine that stores hidden valuable information. By using various statistical methods, algorithms, and artificial intelligence techniques, Data Mining helps identify previously invisible patterns or trends in complex and very large databases. Information obtained from Data Mining can be used to support more precise decision making, improve operational efficiency, understand customer behavior, and design more effective business strategies. In the business world, Data Mining[6] is an important component of Business Intelligence because it is able to provide deep and actionable insights for companies to remain competitive in the market.

Apriori is a basic algorithm first introduced by Agrawal and Srikant in 1994[7][8], and Apriori is also an algorithm designed to accelerate the process of forming frequent itemsets[9][10][11], which are combinations of items that often appear together in transaction datasets. This algorithm uses a rule-based approach known as the downward closure principle or Apriori property, which states that if an itemset does not meet minimum support, then all of its supersets will also not meet minimum support. With this principle, Apriori effectively reduces the number of

itemsets that need to be evaluated, thereby accelerating the analysis process, especially on large and complex datasets. This algorithm is widely applied in various fields, such as retail, marketing, and e-commerce, to identify customer purchasing patterns, compile product recommendations, and design more effective promotional strategies. The main advantage of Apriori[12] is its ability to handle large-scale transaction data and generate association rules that are relevant for business decision making. Research conducted by [13]used the Apriori algorithm on coffee sales at Bardan Coffee and Friend to provide product recommendations based on customer purchasing patterns. The results of the study showed association rules such as (If you buy Kopsu Friends, then buy V60) with a support value of 25% and confidence of 83%. These findings provide cafe owners with valuable insights to develop more effective discount and promotion strategies. However, this study focuses more on analyzing purchasing patterns without linking the results to the development of a more comprehensive business strategy.

Research conducted by [14]applied the Apriori algorithm in furniture sales at CV. Andalas Jaya Furniture Dumai to improve sales strategies. The results showed association patterns such as (If you buy an AC, then you have a 71.42% chance of buying a TV) and (If you buy a TV, then you have a 31.25% chance of buying an AC). This research helps companies determine which items to stock according to consumer needs, so that they can reduce the accumulation of unsold stock. However, the focus of this research is limited to the analysis of purchasing patterns without integrating the results of the analysis into a broader marketing strategy. In a study by [15] Rabiatus Saadah et al. (2020), data mining association analysis using the Apriori algorithm was applied to furniture sales at Master Borneo Pontianak Selatan. The purpose of this study was to identify purchasing patterns and improve sales strategies. The results of the analysis showed that the combination of items that were frequently purchased together resulted in six association rules with a minimum confidence of 41.6% and a minimum support of 0.08% based on 35 transactions from 63 types of goods. This study emphasizes the importance of utilizing data mining in understanding consumer behavior and providing recommendations for companies to improve product and service quality, so that they can maintain customer loyalty in a competitive industry.

Based on previous studies, there is a significant gap in the application of the Apriori algorithm to furniture sales, especially to support business intelligence. Most studies only focus on analyzing transaction data to find purchasing patterns without integrating the results into a broader business strategy. In addition, studies often only highlight certain aspects, such as product recommendations or sales package preparation, without utilizing the data as a whole. As a result, potentially important information is often overlooked, and the resulting analysis does not provide a complete picture of consumer behavior. This study aims to address this gap by applying the Apriori algorithm to furniture sales while connecting it to a more integrated and holistic business intelligence strategy.

Therefore, this study aims to fill the gap by applying the Apriori algorithm to furniture sales data. The Apriori algorithm is used to assist in selecting candidate item combinations, then evaluating whether the combination meets parameters such as support, confidence, and lift ratio. With this approach, this study not only produces transaction patterns that can support decision making, but also integrates the analysis results into business intelligence strategies. This aims to provide more strategic and applicable insights for furniture business managers. In addition, the results of this study are expected to help in identifying superior products and customer purchasing patterns. The application of this algorithm also allows managers to design more effective promotions. Thus, this study makes a real contribution to increasing the competitiveness of the furniture business through optimal data utilization.

2. METHOD

This research was conducted using a quantitative approach that includes four main stages, namely collecting furniture sales data, exploring and visualizing data to understand basic transaction patterns, processing data using the Apriori algorithm to identify frequent purchasing patterns, and evaluating and integrating the analysis results into business intelligence strategies. These stages are designed to ensure that the research results are not only valid in terms of data, but also relevant and can be directly applied to support strategic decision making in the furniture business. The stages of the research carried out are as follows:

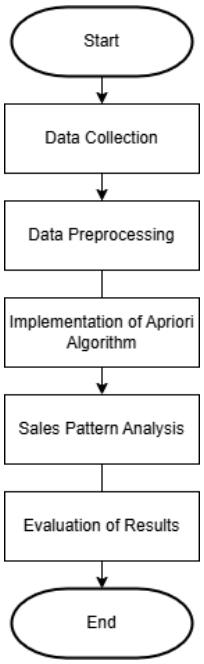

Figure 1. Research steps

In the initial stage, furniture sales transaction data is collected from various sources, such as cashier systems or store databases. The data collected includes important information, such as transaction dates, lists of products purchased, and quantity of items. Completeness and accuracy of the data are very important because this data will be the basis for further analysis. After the data is collected, the next step is to prepare the data so that it is ready to be analyzed using the Apriori algorithm. This process involves converting transaction data into a suitable format, namely a collection of product items purchased in each transaction. This preparation aims to ensure that the data can be analyzed optimally and produce useful insights for the furniture business.

The Apriori algorithm is used to find combinations of items that are frequently purchased together, called frequent itemsets, using two main metrics: Support and Confidence. Support measures how often a combination of items appears in the overall transaction data. The basic formula used in the Apriori algorithm includes:

$$Support\ (A)\ = \frac{\sum Number\ of\ transactions\ containing\ A}{Total\ transactions} * 100\%$$

Confidence measures how strong the relationship is between two items purchased together, calculated based on how often the two items appear together in transactions. Calculated using the formula:

$$Confidence\ (A \rightarrow B) = \frac{Support\ (A \cup B)}{Support\ (A)} * 100\%$$

Lift measures whether two items appear together more often than would be expected randomly, calculated by the formula:

$$Lift\ (A \rightarrow B) = \frac{Confidence\ (A \rightarrow B)}{Support\ (B)} * 100\%$$

Frequent itemsets and association rules generated by the Apriori algorithm are then further analyzed to understand customer purchasing patterns. Combinations of frequently purchased items are evaluated using metrics such as lift ratio, to find important relationships between items. The results of this analysis can be used to design more effective business strategies, such as creating promotional package offers or arranging the layout of goods in the store to be more attractive to customers. Thus, the information obtained can help business managers make more targeted decisions and increase customer satisfaction. This analysis also provides deeper insights into consumer preferences that can be optimized to increase sales.

After the analysis, an evaluation is conducted to test the quality of the association rules and measure how effective they are, such as their impact on sales conversion or increased profits. This evaluation is very important to ensure that the research results can be practically applied in business management. With proper evaluation, businesses can ensure that the strategies generated based on this analysis actually provide added value. It also helps in adjusting strategies to better suit changing market needs and consumer behavior.

3. RESULTS AND DISCUSSION

Furniture sales transaction data was obtained through routine sales recording conducted weekly. For the purposes of this study, data was taken from six weeks with the highest number of transactions. The information was then arranged in a table to facilitate the analysis process and identification of purchasing patterns using the Apriori algorithm. Presenting this structured data is an important step to support the implementation of data mining and generate relevant insights for business intelligence strategies in the furniture business.

Table 1 Sales Transaction Data

No	Transaction Date	Items Purchased
1	05/01/2023	Chair, Table, Wardrobe, Bookshelf, Sofa
2	12/01/2023	Table, Bookshelf, Cabinet, Wardrobe, Sofa
3	19/01/2023	Wardrobe, Sofa, Cabinet, Table, Chair, Bookshelf
4	26/01/2023	Chair, Table, Cabinet, Wardrobe, Bookshelf
5	02/02/2023	Bookshelf, Cabinet, Sofa, Wardrobe, Table, Chair
6	09/02/2023	Wardrobe, Chair, Table, Sofa, Cabinet
7	16/02/2023	Sofa, Bookshelf, Cabinet, Table, Chair
8	23/02/2023	Table, Chair, Sofa, Bookshelf, Cabinet, Wardrobe
9	02/03/2023	Wardrobe, Bookshelf, Sofa, Chair, Table
10	09/03/2023	Bookshelf, Cabinet, Sofa, Table, Wardrobe
11	16/03/2023	Cabinet, Sofa, Chair, Wardrobe, Bookshelf, Table
12	23/03/2023	Table, Wardrobe, Sofa, Bookshelf, Cabinet

Presentation of furniture sales transaction data in tabular format provides a clear and neat structure, making it easier to analyze purchasing patterns. With this tabular format, the frequency of sales of goods can be identified more easily, and data management can be done more effectively. This format also supports the application of the Apriori algorithm to analyze transaction data, so that the results of the analysis can be used to support a more targeted business intelligence strategy. The following is a table of tabular transaction data formats:

Table 2 Tabular Format

Week	Chair	Table	Wardrobe	Bookshelf	Sofa	Cabinet
1	1	1	1	1	1	0
2	0	1	1	1	1	1
3	1	1	1	1	1	1
4	1	1	1	1	0	1
5	1	1	1	1	1	1
6	1	1	1	1	0	1
7	1	1	1	1	0	1
8	1	1	1	1	1	1
9	1	1	1	1	0	1
10	1	1	1	1	0	1
11	1	1	1	1	1	0
12	1	1	1	1	0	1
Total	11	12	12	12	6	10

Based on the tabular format table provided, the next step is the formation of itemset 1 (C1) using a minimum support value of 30%. The following is a calculation table for the formation of itemset 1.

Table 3 Support 1 Itemset

Item	Frequency	***Support*** (%)	Status
Chair	11	$\frac{11}{12}.100\% = 91.67\%$	Passed
Table	12	$\frac{12}{12}.100\% = 100\%$	Passed

Wardrobe	12	$\frac{12}{12}$.100% = 100%	Passed
Bookshelf	12	$\frac{12}{12}$.100% = 100%	Passed
Sofa	6	$\frac{6}{12}$.100% = 50%	Passed
Cabinet	10	$\frac{10}{12}$.100% = 83.33%	Passed

The next step is the formation of itemset 2 (C2). At this stage, two items that have passed the minimum support criteria of 30% of itemset 1 (C1) will be combined. After that, the frequency of occurrence of each pair of items formed will be calculated in the transaction data. The following is a table showing the calculation results for itemset 2 (C2):

Table 4 Support 2 Itemset

Itemset	**Frekuensi**	**Support (%)**	**Status**
{Chair, Table}	9	$\frac{9}{12}$.100% = 75%	Passed
{Chair, Wardrobe}	9	$\frac{9}{12}$.100% = 75%	Passed
{Chair, Bookshelf}	9	$\frac{9}{12}$.100% = 75%	Passed
{Chair, Sofa}	7	$\frac{7}{12}$.100% = 58.33%	Passed
{Chair, Cabinet}	8	$\frac{8}{12}$.100% = 66.67%	Passed
{Table, Wardrobe}	11	$\frac{11}{12}$.100% = 91.67%	Passed
{Table, Bookshelf}	11	$\frac{11}{12}$.100% = 91.67%	Passed
{Table, Sofa}	6	$\frac{6}{12}$.100% = 50%	Passed
{Table, Cabinet}	9	$\frac{9}{12}$.100% = 75%	Passed
{Wardrobe, Bookshelf}	11	$\frac{11}{12}$.100% = 91.67%	Passed
{Wardrobe, Sofa}	6	$\frac{6}{12}$.100% = 50%	Passed
{Wardrobe, Cabinet}	9	$\frac{9}{12}$.100% = 75%	Passed
{Bookshelf, Sofa}	5	$\frac{5}{12}$.100% = 41.67%	Passed
{Bookshelf, Cabinet}	7	$\frac{7}{12}$.100% = 58.33%	Passed
{Sofa, Cabinet}	6	$\frac{6}{12}$.100% = 50%	Passed

After obtaining 2 itemsets that meet the minimum support value above 30%, the next step is to form 3 itemsets or C3 with the same minimum support criteria, which is 30%. The following is a calculation table for the formation of the 3 itemsets.

Table 5 Support 3 Itemset

Item	**Frekuensi**	**Support (%)**	**Status**
{Chair, Table, Wardrobe}	6	$\frac{6}{12}$.100% = 50%	Passed
{Chair, Table, Bookshelf}	7	$\frac{7}{12}$.100% = 58,33%	Passed
{Chair, Table, Sofa}	5	$\frac{5}{12}$.100% = 41,67%	Passed
{Chair, Table, Cabinet}	4	$\frac{4}{12}$.100% = 33,33%	Passed
{Chair, Wardrobe, Bookshelf}	7	$\frac{7}{12}$.100% = 58,33%	Passed
{Chair, Wardrobe, Sofa}	5	$\frac{5}{12}$.100% = 41,67%	Passed
{Chair, Wardrobe, Cabinet}	6	$\frac{6}{12}$.100% = 50%	Passed
{Chair, Bookshelf, Sofa}	4	$\frac{4}{12}$.100% = 33,33%	Passed
{Chair, Bookshelf, Cabinet}	3	$\frac{3}{12}$.100% = 25%	Not Passed
{Chair, Sofa, Cabinet}	6	$\frac{6}{12}$.100% = 50%	Passed
{Table, Wardrobe, Bookshelf}	6	$\frac{6}{12}$.100% = 50%	Passed
{Table, Wardrobe, Sofa}	4	$\frac{4}{12}$.100% = 33,33%	Passed
{Table, Wardrobe, Cabinet}	7	$\frac{7}{12}$.100% = 58,33%	Passed

{Table, Bookshelf, Sofa}	5	$\frac{5}{12}$.100% = 41,67%	Passed
{Table, Bookshelf, Cabinet}	4	$\frac{4}{12}$.100% = 33,33%	Passed
{Table, Sofa, Cabinet}	3	$\frac{3}{12}$.100% = 25%	Not Passed
{Wardrobe, Bookshelf, Sofa}	6	$\frac{6}{12}$.100% = 50%	Passed
{Wardrobe, Bookshelf, Cabinet}	4	$\frac{4}{12}$.100% = 33,33%	Passed
{Wardrobe, Sofa, Cabinet}	6	$\frac{6}{12}$.100% = 50%	Passed
{Bookshelf, Sofa, Cabinet}	5	$\frac{5}{12}$.100% = 41,67%	Passed

The next step is to calculate the confidence value with a minimum threshold of 70%. This process aims to assess the extent of the relationship between items in the association rules, where the higher the confidence value, the stronger the relationship between the items. The confidence value describes the possibility of a second item in a transaction, given that the first item already exists. Association rules that have a confidence value equal to or higher than the minimum value set will be considered valid association rules and useful in decision making. The following is a calculation table for minimum confidence:

Table 6 Confidence Value

Itemset	Frekuensi Itemset	Frekuensi A	Frekuensi B	Confidence (A → B)	Confidence (B → A)	Status
{Chair, Table}	7	9	10	77.78%	70%	Passed
{Chair, Wardrobe}	6	9	9	66.67%	66.67%	Not Passed
{Chair, Bookshelf}	9	9	12	100%	75%	Passed
{Chair, Sofa}	3	9	5	33.33%	25%	Not Passed
{Chair, Cabinet}	5	9	10	55.56%	50%	Not Passed
{Table, Wardrobe}	4	9	7	57.14%	57.14%	Not Passed
{Table, Bookshelf}	6	9	10	66.67%	60%	Not Passed
{Table, Sofa}	8	10	9	87.50%	80%	Passed
{Table, Cabinet}	10	10	12	100%	90%	Passed
{Wardrobe, Bookshelf}	4	10	5	50%	40%	Not Passed
{Wardrobe, Sofa}	6	10	10	75%	60%	Not Passed
{Wardrobe, Cabinet}	5	10	7	62.50%	62.50%	Not Passed
{Bookshelf, Sofa}	7	10	10	87.50%	70%	Passed
{Bookshelf, Cabinet}	6	12	10	100%	75%	Passed
{Sofa, Cabinet}	8	12	10	100%	75%	Passed
{Sofa, Bookshelf}	9	12	12	100%	75%	Passed
{Cabinet, Bookshelf}	3	5	12	33.33%	25%	Not Passed

The following table shows the 2-itemset combinations or C2 that meet the criteria of minimum support of 30% and minimum confidence of 70%. This step ensures that only itemset combinations with strong and relevant relationships are retained, so that they can be used for further analysis in identifying significant purchasing patterns. Thus, this process helps in filtering association rules that have high potential to be applied in marketing strategies or product styling. Itemset combinations that pass this criterion provide deeper insights into customer preferences and their purchasing habits.

Table 7 Confidence Value Passed

Itemset	Frekuensi Itemset	Support (%)	Confidence (A → B)	Confidence (B → A)	Lift
{Chair, Table}	7	58.33%	77.78%	70%	01.11

{Chair, Wardrobe}	6	50%	75%	60%	01.25
{Chair, Bookshelf}	8	66.67%	87.50%	80%	01.33
{Chair, Sofa}	9	75%	100%	85%	01.44
{Chair, Cabinet}	5	41.67%	60%	50%	01.20
{Table, Wardrobe}	7	58.33%	77.78%	70%	01.10
{Table, Bookshelf}	9	75%	100%	85%	01.33
{Table, Sofa}	10	83.33%	100%	90%	01.50
{Table, Cabinet}	6	50%	70%	60%	01.25
{Wardrobe, Bookshelf}	8	66.67%	87.50%	80%	01.33
{Wardrobe, Sofa}	9	75%	100%	85%	01.44
{Wardrobe, Cabinet}	7	58.33%	77.78%	70%	01.11
{Bookshelf, Sofa}	8	66.67%	87.50%	80%	01.33
{Bookshelf, Cabinet}	5	41.67%	60%	50%	01.20
{Sofa, Cabinet}	6	50%	70%	60%	01.25

4. CONCLUSION

The results of this study identified the most frequently purchased products in furniture stores, with tables, cupboards, and bookshelves having the highest purchase rate at 100%, followed by cabinets at 83.33%, chairs at 91.67%, and sofas at 66.67%. These findings provide important insights for store owners in planning marketing strategies and stock management according to market demand. By utilizing Data Mining and the Apriori Algorithm, business actors can understand customer purchasing patterns in depth, so they can design more effective promotions and maintain inventory that suits customer needs.

ACKNOWLEDGEMENTS

I would like to express my gratitude to myself for my efforts and dedication in completing this research. Hopefully the results of this research can provide benefits to readers and contribute to improving the quality of research in the future.

REFERENCES

[1] S. Pokhrel, “No TitleΕΛΕΝΗ,” *Αγαη*, vol. 15, no. 1, pp. 37–48, 2024.
[2] K. JASMINE, *済無No Title No Title No Title*. 2014.
[3] B. G. Sudarsono, M. I. Leo, A. Santoso, and F. Hendrawan, “Analisis Data Mining Data Netflix Menggunakan Aplikasi Rapid Miner,” *JBASE - J. Bus. Audit Inf. Syst.*, vol. 4, no. 1, pp. 13–21, 2021, doi: 10.30813/jbase.v4i1.2729.
[4] A. R. Riszky and M. Sadikin, “Data Mining Menggunakan Algoritma Apriori untuk Rekomendasi Produk bagi Pelanggan,” *J. Teknol. dan Sist. Komput.*, vol. 7, no. 3, pp. 103–108, 2019, doi: 10.14710/jtsiskom.7.3.2019.103-108.
[5] S. G. Database, P. License, and L. Material, “Creative Commons Attribution 4 . 0 International Public License,” no. March, pp. 0–4, 1996.
[6] Z. Nabila, A. Rahman Isnain, and Z. Abidin, “Analisis Data Mining Untuk Clustering Kasus Covid-19 Di Provinsi Lampung Dengan Algoritma K-Means,” *J. Teknol. dan Sist. Inf.*, vol. 2, no. 2, p. 100, 2021, [Online]. Available: http://jim.teknokrat.ac.id/index.php/JTSI
[7] P. M. S. Tarigan, J. T. Hardinata, H. Qurniawan, M. Safii, and R. Winanjaya, “Implementasi Data Mining Menggunakan Algoritma Apriori Dalam Menentukan Persediaan Barang,” *J. Janitra Inform. dan Sist. Inf.*, vol. 2, no. 1, pp. 9–19, 2022, doi: 10.25008/janitra.v2i1.142.
[8] S. Shimada, 島田荘司, and D. Nugraheny, “Implementasi Data Mining Menggunakan Metode Apriori Pada Transaksi Penjualan Barang (Studi Kasus Di Chorus Minimarket),” *Compiler*, vol. 1, no. 1, pp. 17–30, 2015, [Online]. Available: https://www.neliti.com/id/publications/236144/implementasi-data-mining-menggunakan-metode-apriori-pada-transaksi-penjualan-bar
[9] R. Abizal, Y. Syahra, and H. Hafizah, “Implementasi Algoritma Apriori Dalam Menganalisis Pola Penjualan Pada Restoran Sederhana,” *J-SISKO TECH (Jurnal Teknol. Sist. Inf. dan Sist. Komput. TGD)*, vol. 5, no. 1, p. 76, 2022, doi: 10.53513/jsk.v5i1.4794.
[10] J. R. Gumilang, “Implementasi Algoritma Apriori Untuk Analisis,” *J. Inform. dan Rekayasa Perangkat Lunak*, vol. 1, no. 2, pp. 226–233, 2020, [Online]. Available: http://jim.teknokrat.ac.id/index.php/informatika
[11] A. J. P. Sibarani, “Implementasi Data Mining Menggunakan Algoritma Apriori Untuk Meningkatkan Pola Penjualan Obat,” *JATISI (Jurnal Tek. Inform. dan Sist. Informasi)*, vol. 7, no. 2, pp. 262–276, 2020, doi: 10.35957/jatisi.v7i2.195.
[12] A. Setiawan and F. P. Putri, “Implementasi Algoritma Apriori untuk Rekomendasi Kombinasi Produk Penjualan,”

Ultim. J. Tek. Inform., vol. 12, no. 1, pp. 66–71, 2020, doi: 10.31937/ti.v12i1.1644.

[13] I. Rosmayati, W. Wahyuningsih, E. F. Harahap, and H. S. Hanifah, "Implementasi Data Mining pada Penjualan Kopi Menggunakan Algoritma Apriori," *J. Algoritm.*, vol. 20, no. 1, pp. 99–107, 2023, doi: 10.33364/algoritma/v.20-1.1259.

[14] D. Anjani, D. Novianti, K. Kunci, A. Apriori, T. Penjualan, and P. Pola, "KLIK: Kajian Ilmiah Informatika dan Komputer Implemetasi Algoritma Apriori dalam Penjualan Mebel," *Media Online*, vol. 3, no. 5, pp. 435–440, 2023, [Online]. Available: https://djournals.com/klik

[15] M. I. R. I. Rabiatus Saadah, Badariatul Lailiah, Windu Gata, "Analisa Asosiasi Data Mining Penjualan Meubel Menggunakan Algoritma Apriori Pada Master Borneo Pontianak Selatan," *Drh. Khusus Ibuk. Jakarta*, vol. 13, no. 2, p. 21231170, 2020, [Online]. Available: http://journal.stekom.ac.id/index.php/elkom■page31