Report: Exploratory Data Analysis of Customer Behaviour in Transactions

The objective of this analysis was to uncover actionable insights from three datasets—customers.csv, products.csv, and transactions.csv—focusing on user behaviour, product preferences, and order trends. Key goals included cleaning and merging data, identifying relationships between customer preferences and orders, recognizing most revenue generating products, and analysing demographic influences. The findings are supported by visualizations and culminate in business recommendations for strategic decision-making.

FINDINGS FROM GRAPHS AND PLOTS

- Highest number of customers from South America and average spending in South America is high. They spend more in "Books" and "Electronics" than "Clothing" and "Home Decor"
- There is a boom in customers in North America in 2024
- Even though transactions is higher in January , but lower in average sales
- Highest average sale happens in December and highest selling item in December is "home Decor"

BUSINESS INSIGHTS AND RECOMMENDATIONS

- Least Average sales is in 'March' and in this month clothing is the lowest purchased category- to enhance sales, focus on women customers by introducing new sales, Discounts, Coupons on 'International-women's day' on March.
- Home-Decors are the least average sales producing category. So enhance Promotions through social media and through other methods especially on October and November (Halloween Season) for Clothing and Home-Decors.
- There is no progress in new customers from Asia. Generate customer friendly and budget friendly plans to attract more customers from such a culture rich region.
- Introduce new products in all category. T-shirts, Jackets , Jeans, Sweaters and shoes are the current selling products under clothing.
- Know the customers. Give priority to old customers and provide good customer service to attract new customers

CONCLUSION

This analysis addressed major issues and insights about the customers, their order preferences, categories, major revenue generating products, and location where majority of the customers from etc.Also this report brings forth some business recommendations for boost in orders and thereby boost in salesBy analysing these suggestions and implementing necessary actions the growth of the company can be surely ensured.

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END OF REPORT