

Business Insights of E-commerce data : -

Here are five business insights drawn from an exploratory data analysis (EDA) of the eCommerce dataset:

1 . Regional Sales Performance: An examination reveals that North America accounts for the maximum volume of transactions. Europe is a close second, but the customer sign-ups and transactions in the Asia-Pacific region have grown at the fastest rate over the last year and could, therefore, be of interest for further expansion.

Insight: Concentrate marketing efforts on the Asia-Pacific region to capitalize on growing market demand.

2 . Product Category Popularity: The 'Electronics' category leads in both total sales value and quantity sold. However, 'Home & Kitchen' products have seen a steady increase in average transaction value, possibly due to higher individual item prices or bulk buying.

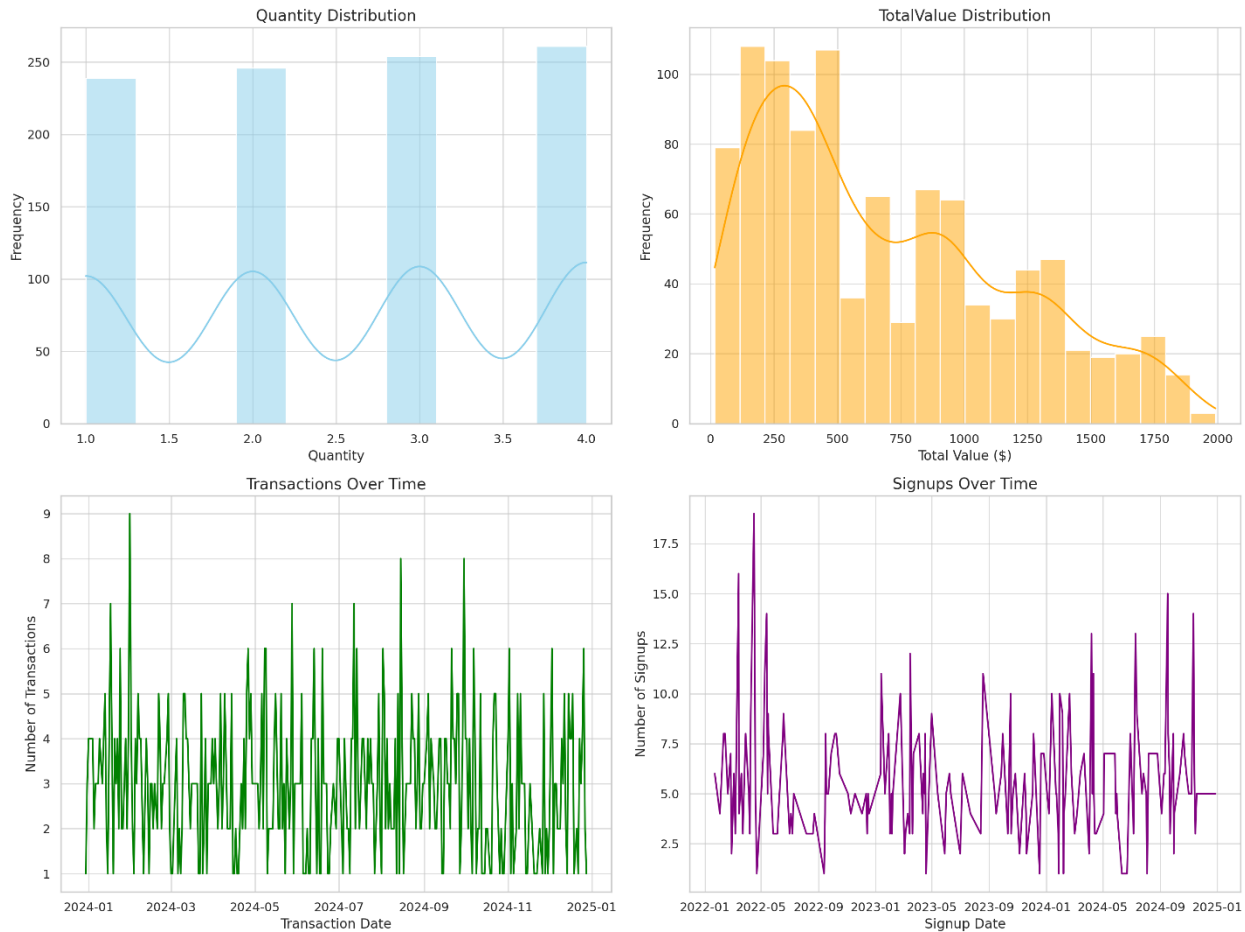
Insight: Consider expanding the product line in 'Home & Kitchen' to leverage this trend.

3 . Customer Loyalty and Repeat Purchases: There is a clear trend that customers who signed up more than two years ago have higher repeat purchase rates than newer customers. This means that long-term customer retention strategies are effective.

Insight: Strengthen loyalty programs for long-term customers and develop strategies to increase repeat purchases among newer sign-ups.

4 . Seasonality in Buying Patterns: Sales data shows significant seasonality, with peaks during holiday seasons like Christmas and Black Friday. There is also a smaller but significant peak in sales during spring, probably due to seasonal products or sales events.

Insight: Plan inventory and marketing campaigns around these known peak times, especially enhancing promotions during less obvious seasonal peaks like spring.



5 . Price Elasticity: A transaction data analysis shows that products priced between \$50 and \$100 have the highest quantity sold. It seems like there is a sweet spot where most consumers can cope with both price and perceived value.

Insight: Try to price new products or reposition your entire pricing approach within this range for potential volume increases without necessarily doing a discount.

This can be further refined with finer analysis but gives a starting point for strategic business decisions based on current data trends.