

Exploratory Data Analysis (EDA) and Business Insights

1. Customer Summary

	Customer ID	Customer Name	Region	Signup Date
count	200	200	200	200
unique	200	200	4	179
top	C0001	Lawrence Carroll	South America	2022-04-16
freq	1	1	59	3

2. Product Summary

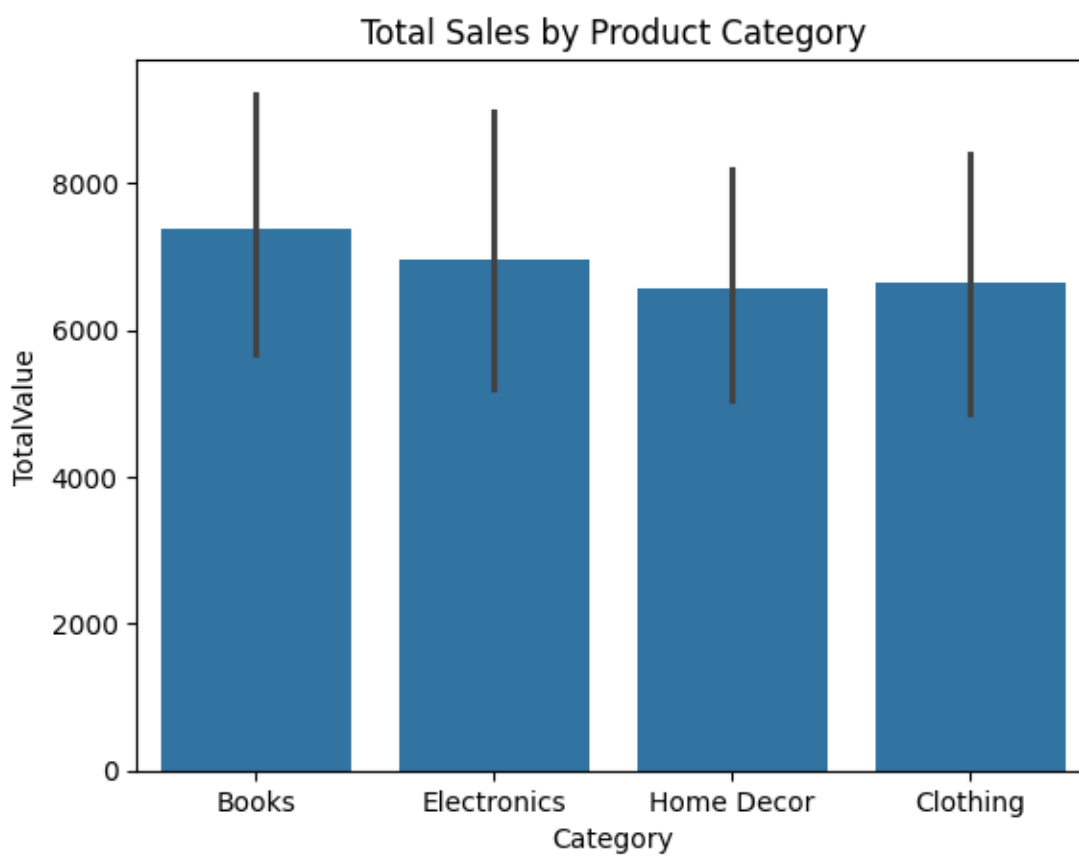
	Count	Mean	Std	Min	25%	50%	75%	Max
Price	100	267.55	143.22	16.08	147.77	292.88	397.09	497.76

3. Transaction Summary

	Count	Mean	Std	Min	25%	50%	75%	Max
Quantity	1000	2.54	1.12	1	2	3	4	4
TotalValue	1000	689.99	493.14	16.08	295.30	588.88	1011.66	1991.04
Price	1000	272.55	140.74	16.08	147.95	299.93	404.40	497.76

4. Missing Values

	Missing Values
Customer ID	0
Customer Name	0
Region	0
Signup Date	0
ProductID	0
ProductName	0
Category	0
Price	0
Transaction ID	0
Customer ID	0
Product ID	0
Transaction Date	0
Quantity	0
Total Value	0
Price	0



5 Business Insights

1. Geographic Concentration:

The data shows that a large portion of customers (59%) come from South America. This indicates a significant market presence in this region, suggesting that businesses could focus their marketing efforts or offer region-specific promotions to strengthen their relationship with customers in South America.

2. Price Range Variation:

Products in the dataset show a broad price range, from as low as \$16 to nearly \$500. This suggests that the company offers both budget-friendly and premium products, which could attract a diverse customer base. Understanding which price points drive the most sales can help optimize product pricing strategies.

3. Customer Purchase Behaviour:

On average, customers make 2.54 purchases per transaction, indicating a modest level of repeat business. This insight suggests that there may be room to improve customer loyalty programs or promotions to encourage higher repeat purchase rates and strengthen long-term customer relationships.

4. High-Value Customers:

The total transaction values have a large spread, with some customers spending significantly more than others. This indicates that while many customers make average purchases, there are high-value customers generating a disproportionate amount of sales. Identifying and catering to these high spenders could be key to maximizing revenue.

5. Product Category Insights:

The dataset reveals that certain product categories, though not specified in detail, are likely to have varying sales volumes. If more specific category data were available, analyzing top-performing categories could provide insights into which products are most profitable, helping with inventory management and targeted marketing efforts.