

Detailed Business Insights from EDA (Task 1)

Customer Distribution by Region:

- South America has the largest share of customers (~35%), showing it is a key market for the business.
- Asia and Europe follow with ~25% and ~20%, respectively, indicating a balanced presence across regions.
- North America has the smallest customer base (~15%), presenting a potential growth opportunity through regional campaigns.

Product Distribution by Category:

- The "Books" category accounts for ~40% of the total product offerings, highlighting a strong focus on this segment.
- Categories such as "Electronics" and "Apparel" have moderate representation (~25% each), indicating room for optimization.
- "Home Decor" products comprise only ~10% of the catalog, suggesting a need to expand this category to capture additional market demand.

Monthly Transaction Value:

- Transaction volumes show significant spikes during December, likely tied to holiday shopping, contributing ~20% of annual transactions.
- A secondary peak is observed in July, which may align with mid-year sales or promotional events.
- The steady transaction volumes in other months suggest a need for creative campaigns to boost off-season sales.

Top 10 Customers by Transaction Value:

- The top 10 customers account for over 20% of total transaction value, emphasizing their importance in driving revenue.
- High spending customers make frequent purchases, with an average transaction frequency of 10+ per year.
- Introducing exclusive loyalty benefits for these customers, such as VIP access or early sales, could strengthen their retention.

Price Distribution of Products:

- Over 60% of products are priced between \$100–\$300, aligning with mid-tier affordability for most customers.
- Products priced below \$100 are limited (~15%), suggesting a gap in catering to budget-conscious shoppers.
- Only ~10% of products are priced above \$300, indicating potential to develop a premium product line to capture higher-margin sales.