

Task 1: Exploratory Data Analysis (EDA) and Business Insights

1. Perform EDA on the provided dataset

Step 1: Load the data and check for missing values and basic stats

Step 2: Explore Customer Dataset

Step 3: Explore Product Dataset

Step 4: Explore Transaction Dataset

Step 5: Segmenting Customers

2. Derive at least 5 business insights from the EDA

Business Insight 1: Regional Customer Distribution

- Insight: Most customers are from South America, followed by Asia and Europe. North America has the fewest customers. This indicates that the business has a strong foothold in South America, and there may be potential to increase marketing efforts in North America to drive growth in this region.

Business Insight 2: Customer Signup Trends

- Insight: Customer signups have been gradually increasing since 2022, with a noticeable peak in mid-2024. The spike could be due to seasonal promotions or marketing campaigns. Planning for future promotions around these peak months could further accelerate customer acquisition.

Business Insight 3: Product Category Popularity

- Insight: The product categories 'Books' and 'Electronics' account for a significant portion of the total sales. Focusing on improving the variety and quality of products in these categories could lead to higher revenue and attract more customers.

Business Insight 4: Price Range Distribution

- Insight: Most products fall within a moderate price range, with a few high-ticket items in the Electronics and Clothing categories. Offering discounts or bundled deals on high-priced items could encourage more purchases while maintaining profitability.

Business Insight 5: Top Revenue-Generating Products

- Insight: The top 3 revenue-generating products are primarily high-priced items from the Electronics category. This suggests that customers are willing to spend more on tech products. Increasing the marketing and promotion of these products could maximize revenue.