

TASK 1: Explanatory Data Analysis and Business Insights.

DATA.

1. Customers.csv
The dataset contains customer information with name, region and signup date.
2. Products.csv
The dataset contains product information with product name, price and category.
3. Transactions.csv
The dataset contains purchase information of products and its buyer.

BUSINESS INSIGHTS.

1. Product Performance.

- The product sales in Electronics category shows a significant increase in sales during holidays suggesting a peak demand for electronics. The capitalize can be increased by focusing on marketing in Electronics category during holiday season.
- There is steady market demand for products in Home Décor category throughout the year. Home decor products must be maintained in a consistent manner throughout the year.
- There is a spike in sales for Clothing during major holidays and change of seasons, indicating seasonal buying patterns. Seasonal promotions can be planned for clothing to maximize sales during peak.

2. Impact of Customer Signup date on Purchases.

- New customers are greatly engaged after the initial signup.
- There is a decline in customer engagement over period with a decline in sales.

- New onboarding programs must be initialised to engage new customers and repeat purchases.
- Customer data can be personalized to improve marketing efforts and customer retention.

3. Customer segmentation by spending.

- Majority of customers fall into low to medium spending categories.
- A small percentage of customers are in high to very high spending categories but contribute significantly to total revenue.
- Develop targeted marketing campaigns for each spending segment to maximize engagement.
- Offer exclusive rewards to high-value customers.

4. Analysis of repeat purchases.

- A significant percentage of customers are repeat buyers indicating strong customer loyalty.
- Implementation of rewards to repeat purchases.
- Focus on improving customer satisfaction to maintain and increase percentage of repeat customers.

5. Regional Sales Distribution.

- The transactions and sales are highest in Europe, indicating a strong market presence and consumer base. More marketing resources can be allocated, as it is profitable region.
- There is a significant sale in Asia and North America, suggesting potential opportunities.
- South America has low sales, indicating the need of targeted marketing efforts.