

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

1. Customers Distribution by Regions

The customers are spread out geographically: 59 in South America, 50 in Europe, 46 in North America, and 45 in Asia. There are the highest numbers of customers in South America. Next comes Europe and North America with fewer but still considerable numbers of customers. To further move on these growth spurts, the company must try to achieve more visibility for the brand and more promotion in Europe and North America.

2. Customer Sign-Up Trends

Customer signups are highest in November 2024; however, this seems to be towards the tail end of 2023 and the early half of 2024. Presumably, this is seasonal trend or holiday season promotion. It can further boost signups with ad running during peak times and discounts during those times. This fluctuation could help plan resource distribution.

3. Best-Selling Products by Number Sold

The highest-selling products are P054, P059, and P029, selling 43 to 46 units for each. This indicates a constant demand for certain items, which should be supported during inventory management and marketing strategies. Having more sales may be encouraged if such popular products are bundled together or put on promotions.

4. High-Spending Customers

A few high-value customers, like C0141, C0054, and C0065, gave a big share in total revenue. The largest spender is over \$10,000. These are also value-enhancing customers; therefore, it can be a good target marketing or loyalty program for personal marketing. From these, the company can derive long-term profitability along with a more significant lifetime customer value.

5. Price Distribution of Product

The prices of the products range between \$16 and \$497. The median is approximately \$292. Thus, the company presents both affordable and premium ones. It will attract a larger number of customers. Further extension may come from the even more budget-friendly products attracting a larger share of price-sensitive customers. Meanwhile, marketing the premium products should focus on the high-spending customers.

Conclusion

These insights are crucial for fine-tuning strategies in inventory management, customer engagement, regional marketing, and pricing decisions. The business focuses on high-value customers, popular products, and seasonal trends to increase revenue growth while optimizing marketing and operational efforts.