

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

Business Insights:

1. Regional Customer Distribution

Customers appear to be spread across multiple regions, with a noticeable concentration in South America followed by Europe. Analyzing sales by region could reveal the most profitable areas, enabling more targeted and effective marketing campaigns.

2. Product Price Range

The majority of products fall into the mid-to-high price range, suggesting a focus on quality rather than low-cost items. Average prices in the Books and Electronics categories are particularly high, indicating that customers may prefer higher-end products within these categories.

3. Category Popularity

Certain categories, such as Books and Electronics, dominate in terms of the number of products sold. These popular categories present opportunities for targeted promotions and tailored marketing strategies to maximize sales.

4. Seasonal Signups and Transactions

Analysis of signup and transaction dates reveals seasonal trends. Customer acquisitions peak during specific months, such as July 2024, followed by January 2024. Aligning marketing campaigns with these periods could further boost signups and transactions.

5. Customer Retention and Frequency

Frequent purchasers can be identified for loyalty programs, which can enhance retention rates. On the other hand, customers who have not purchased recently could benefit from re-engagement strategies, such as personalized offers or promotions.

6. Top-Selling Products

Products with the highest quantities sold, such as Product P059, can guide inventory management and marketing efforts. These top-selling products should be prioritized for promotions and prominently featured on the platform to drive further sales.