

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

- Business Insights from the EDA on the datasets

1. Geographic Disparities in Sales:

Certain regions like **South America, North America** consistently outperform others in terms of total revenue and transaction frequency. Marketing efforts and inventory allocation should prioritize high-performing regions to maximize returns.

2. Seasonal Variations in Transactions:

Transaction volumes and revenue exhibit seasonality, with peaks during **July, August, September months**. Aligning marketing campaigns and inventory planning with these patterns can optimize resource utilization.

3. Product Demand powers Revenue:

Specific product **categories** like **electronics and books** generate the highest sales, suggesting a need to focus promotions and stock management on these categories while identifying opportunities for underperforming ones.

4. High Revenue Contribution from Top Customers:

A **small group of customers** is responsible for most of the revenue, showing that the business depends heavily on these high-value customers. This makes it clear that focusing on personalized strategies to engage and retain these key customers is essential for long-term success.

5. Opportunities to Retain Customers:

Many customers shop infrequently, highlighting a chance to encourage repeat purchases through targeted strategies like loyalty programs or special discounts. These efforts can help improve customer engagement and drive more consistent transactions.