

Business Insights Report on Customer, Product and Transaction data

Introduction

This report presents an in-depth analysis of customer and product data, exploring sales patterns, customer behaviours, and product performance. By examining key metrics such as total sales, product popularity, revenue contributions, and customer engagement, we aim to provide actionable business insights. These insights can inform strategic decisions related to marketing, inventory management, and customer retention.

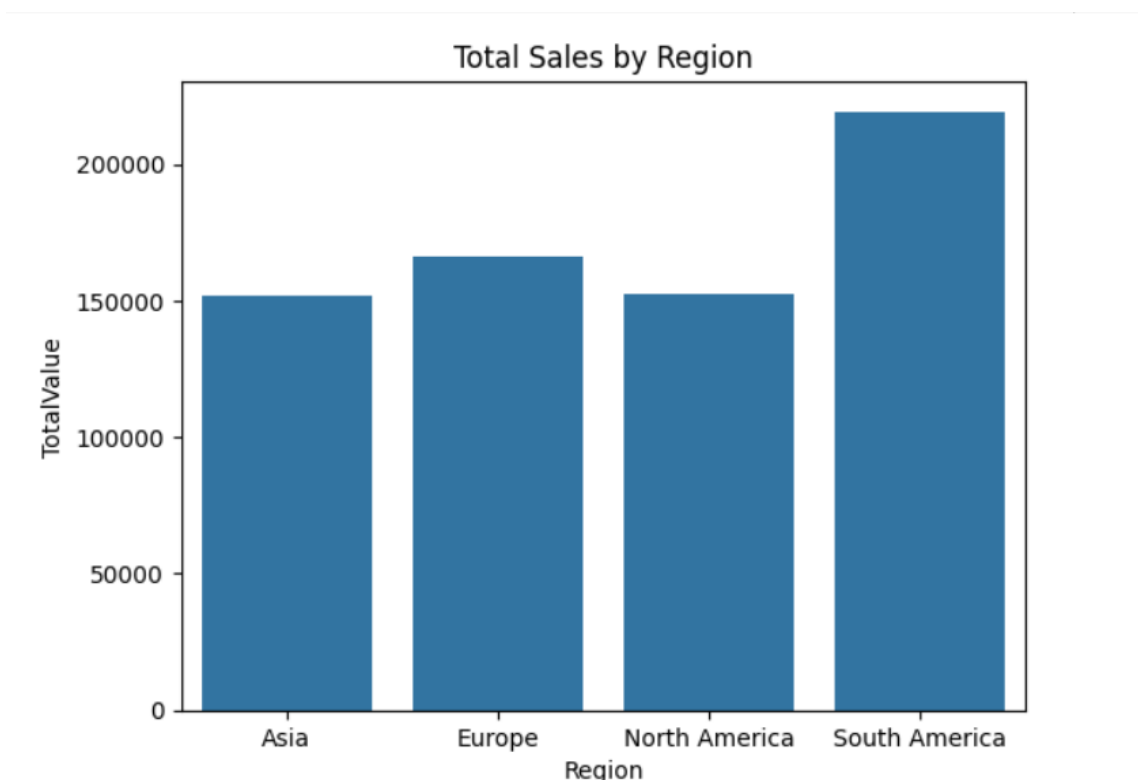
1. Total Sales by Region

Analysis:

The total sales by region were analysed to identify how customer purchases are distributed geographically. We grouped the transaction data by region and aggregated the total sales value for each region.

Business Insight:

- The **Sales by Region** chart reveals the regions with the highest total sales, allowing the business to focus its marketing and sales efforts on high-performing regions.
- By identifying strong-performing regions, the company can optimize supply chain and distribution channels to cater to regional demands.



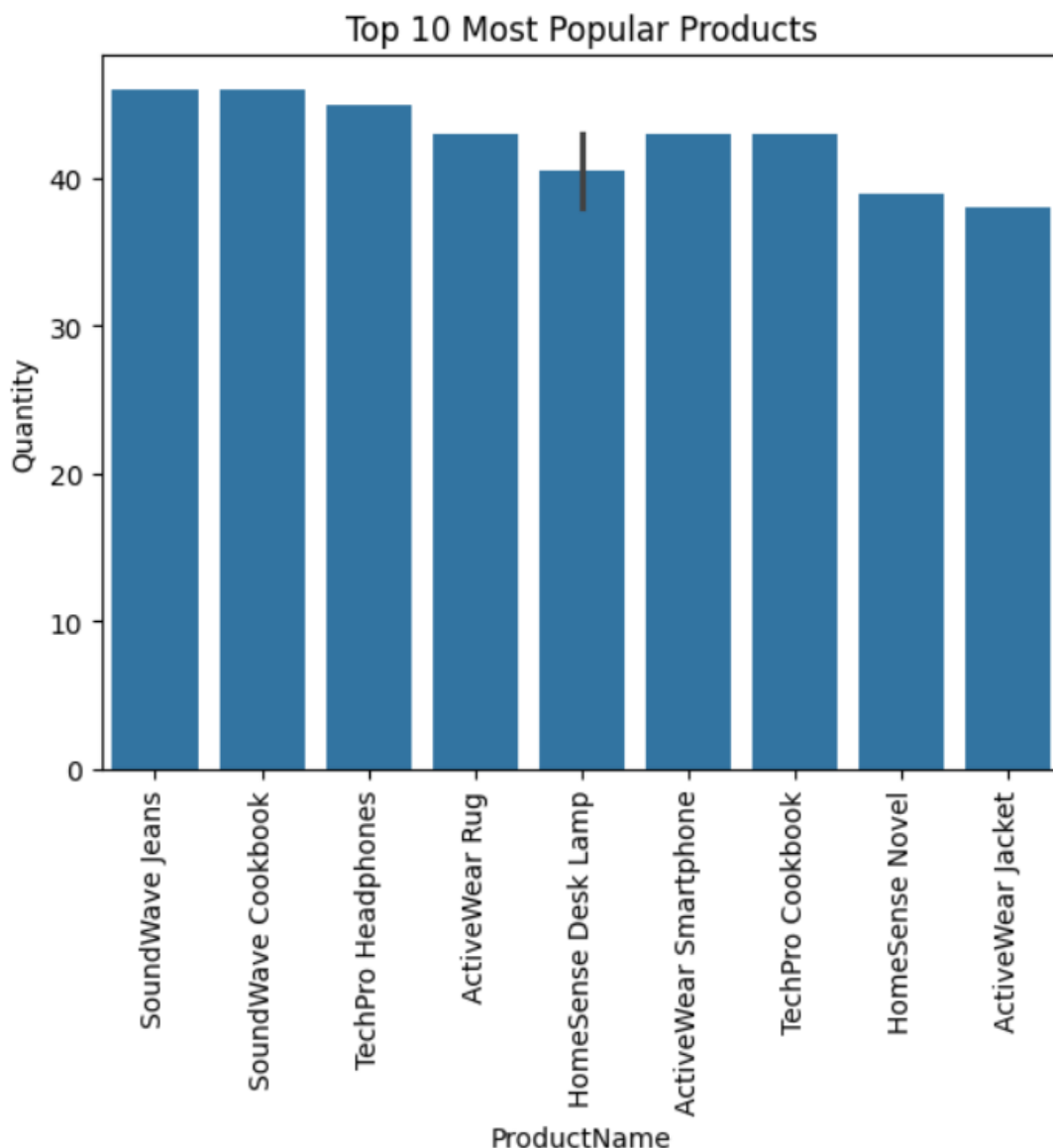
2. Top 10 Most Popular Products

Analysis:

We examined product sales to determine which items were most popular based on the quantity sold. The **Top 10 Most Popular Products** were identified by summing the quantity sold per product.

Business Insight:

- The chart highlights the **most purchased products**, which can be used to optimize inventory management and marketing strategies.
- Popular products should be prioritized in promotions, and sales strategies should be focused on increasing the reach and visibility of these products.



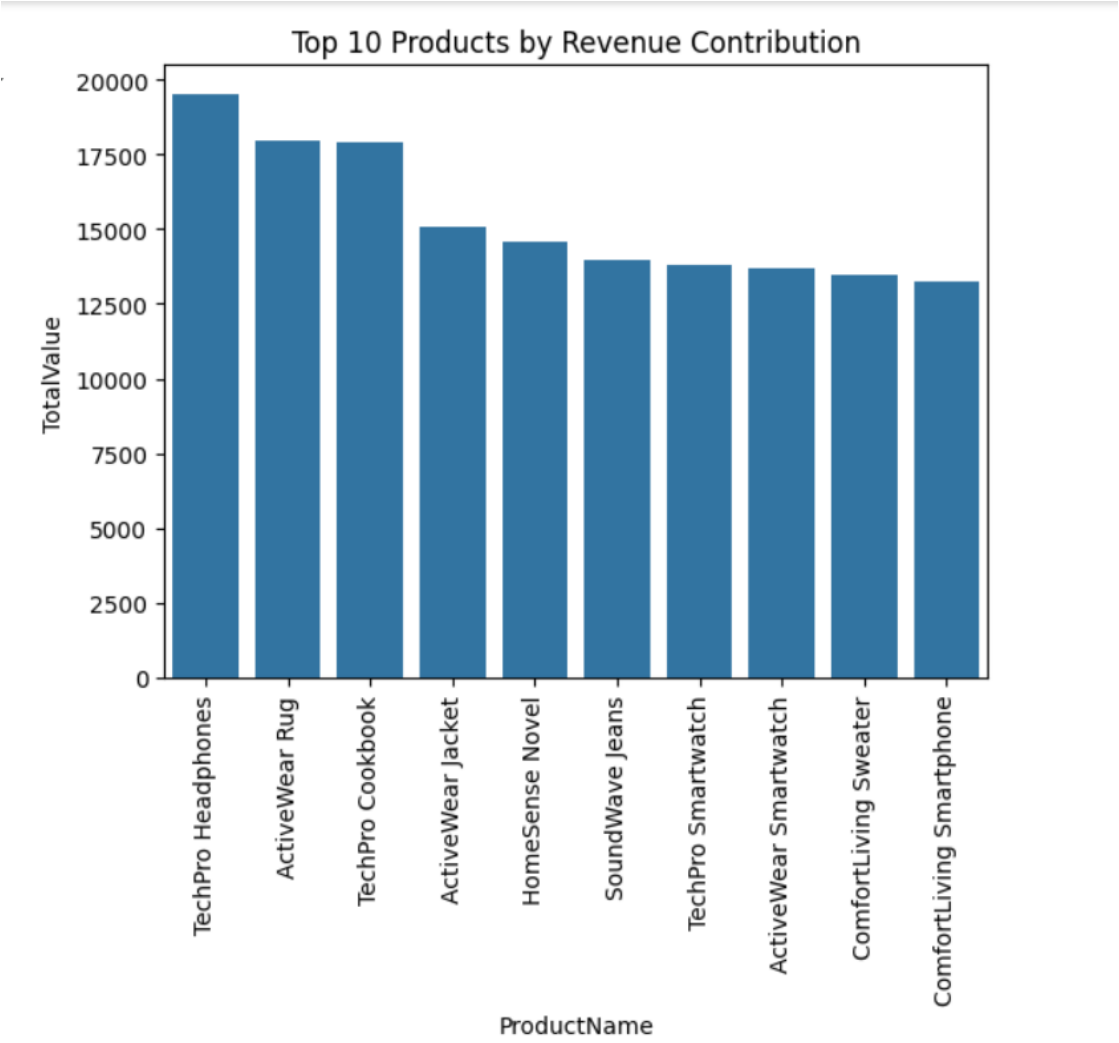
3. Top 10 Products by Revenue Contribution

Analysis:

In this analysis, we focused on the **revenue contribution** of each product, rather than the quantity sold. Products were ranked by the total sales value they generated, providing a clearer picture of which products contribute the most to overall revenue.

Business Insight:

- **High-revenue products** should be promoted more heavily, as they are the primary drivers of business profitability.
- This analysis allows businesses to prioritize high-revenue products for targeted marketing, bundle offers, and premium pricing strategies.



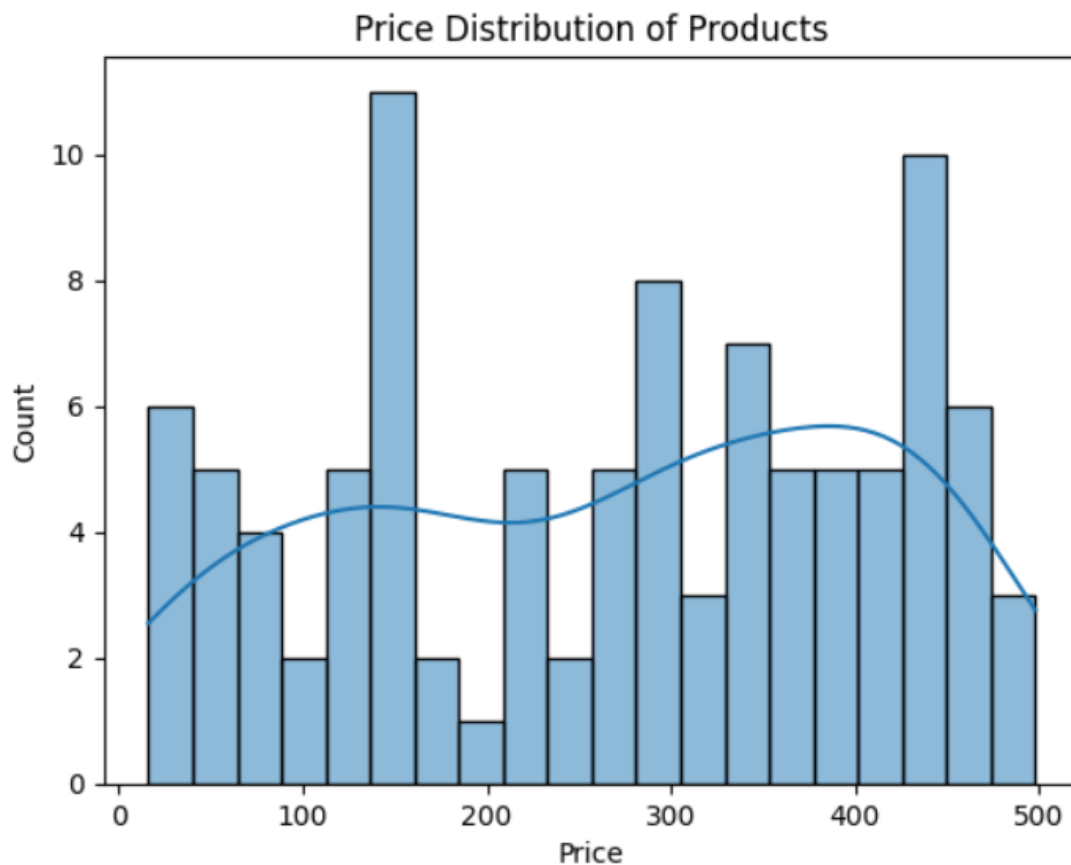
4. Price Distribution of Products

Analysis:

The distribution of product prices was analysed using a histogram. This shows how product prices are spread across different price ranges in the dataset, giving us insight into the pricing strategy.

Business Insight:

- The **Price Distribution** chart reveals the pricing structure, indicating whether products are priced similarly or span a wide range.
- Understanding this distribution can help refine pricing strategies to be more competitive, ensuring products are priced appropriately for the target market.



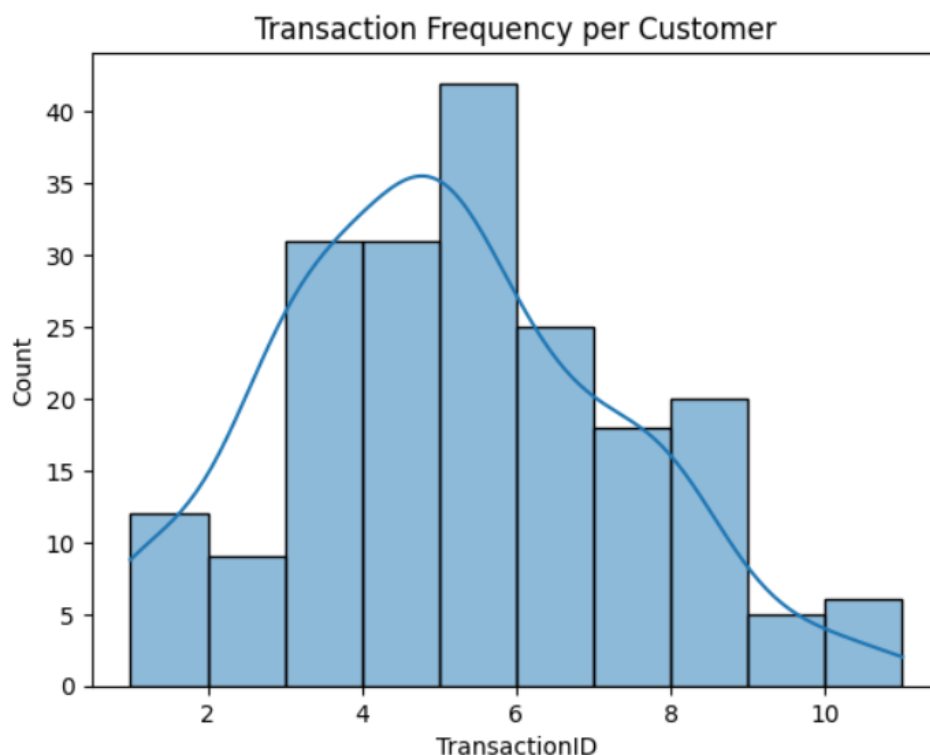
5. Transaction Frequency per Customer

Analysis:

We analysed the frequency of transactions by each customer to understand customer engagement. This metric helps us determine how often customers make purchases and identify patterns in buying behaviour.

Business Insight:

- The **Transaction Frequency** histogram shows that most customers have low-frequency transactions, suggesting opportunities for re-engagement through loyalty programs or special promotions.
- A segment of customers with high transaction frequency represents a loyal customer base that can be rewarded with exclusive offers.



Conclusion

This analysis of customer and product data has provided valuable insights into regional sales trends, popular products, pricing strategies, and customer behaviour. By leveraging these insights, the business can:

- **Focus marketing efforts** on high-revenue regions and products.
- **Optimize inventory management** by prioritizing popular products.
- **Enhance customer engagement** through loyalty programs, targeted promotions, and personalized offers based on transaction behaviour.

These actionable insights will guide future business strategies and decision-making processes, ultimately contributing to increased sales and profitability.