

eCommerce Transaction Dataset EDA

1.Sales by Region

Analyzing sales by region provided valuable insights. The top region contributed the most to overall revenue, showing a strong customer base and high-value purchases. Most of the revenue was generated from South Africa. On the other hand, regions with lower sales represent untapped opportunities for growth with targeted marketing. Asia, Europe and North America have great potential of adding to revenue if it is well marketed and unique strategies are employed. If revenue is heavily concentrated in one or two regions, it's a risk, highlighting the need to expand in other areas as in this case where it is mostly concentrated in South America. Differences in spending habits across regions points to varied customer preferences. Seasonal trends in sales by region can also help plan promotions and stock, ensuring better alignment with local customer needs.

2.Most Selling Products

The top-selling items dominate transactions, indicating their strong appeal to customers and possibly their affordability or unique features. Products in high demand should be promoted further to boost sales even more and should be produced in higher quantity like ActiveWear Smartwatch. On the flip side, low-selling products need better marketing, pricing adjustments, or improvements to meet customer needs. The popularity of certain categories highlights customer preferences, helping refine product strategies. Seasonal trends in top products can also guide inventory planning, ensuring availability during peak demand periods. Understanding these patterns helps optimize product offerings and enhance overall customer satisfaction.

3Sales Trends Over Time

Consistent growth in sales indicates a healthy business, while dips may signal seasonal patterns or areas needing attention. Peaks in sales often align with holidays, promotions, or new product launches, highlighting the importance of strategic timing. Flat or declining trends might suggest changing customer preferences or increased competition, requiring adjustments to offerings or marketing. Monthly or yearly comparisons reveal periods of high demand, helping businesses plan inventory and resources effectively. Spotting long-term trends, such as rising interest in specific categories, supports better forecasting and strategic decision-making to drive sustained growth.

4.Revenue by Product Category

Categories generating the most revenue indicates customer preference and can be prioritized in marketing and inventory planning like books and electronics. High-performing categories may suggest a strong market demand or product quality, warranting further investment. Conversely, low-revenue categories highlight areas that need improvement, either through better marketing, product enhancements, or price adjustments. Revenue distribution across categories helps identify potential growth areas, guiding future product development. Additionally, variations in revenue by category can reflect changing customer trends or seasonal preferences, providing actionable information for optimizing product offerings and aligning with market demand.

5.Customer Segmentation

High-value customers like Paul Parsons, who contribute significantly to revenue, are key to business success and should be prioritized with loyalty programs or personalized offers. Identifying these top customers helps in focusing marketing efforts and improving retention strategies. On the other hand, low-value customers may require targeted strategies to increase their engagement or spending, such as offering discounts or incentives. Understanding transaction patterns across different customer segments can also reveal opportunities for upselling or cross-selling. This segmentation helps businesses refine their approach, maximize revenue, and ensure a personalized experience for each customer group.