

Business Insights from Exploratory Data Analysis (EDA)

1. Steady Growth in Customer Signups:

Customer signups have shown a consistent increase over the years, indicating a growing user base and expanding market reach.

2. Peak Signup Days - Weekends:

Most user signups occur on *Saturdays* and *Sundays*. To maximize reach and engagement, strategically scheduling posts and advertisements during weekends can be highly effective.

3. Revenue Peaks in Q3:

The third quarter consistently generates the highest revenue. Businesses can leverage this trend by aligning marketing campaigns, product launches, and promotions accordingly.

4. Optimal Transaction Timings:

Most transactions take place on *Tuesdays* and during *nighttime* hours. Tailoring promotional efforts and targeted advertisements during these peak periods can enhance sales performance.

5. Regional Revenue Contributions:

South America is a key contributor to overall revenue, highlighting the importance of focusing marketing strategies and resources on this region.

6. Product Popularity by Region:

- South America: High demand for ActiveWear Smartwatches and ActiveWear Textbooks.
- North America: Strong preference for SoundWave Headphones.

Understanding these regional preferences can help in optimizing inventory management and marketing strategies.

7. Book Demand in South America:

Books enjoy significant demand in South America, presenting an opportunity to introduce region-specific promotions and partnerships.

8. Seasonal Sales Trends:

Certain product categories exhibit seasonal demand. For instance, Clothing and Books experience higher sales during the third quarter, suggesting the need for timely inventory adjustments and marketing initiatives.

9. Top-Selling Product:

The ActiveWear Smartwatch stands out as the most popular product on the eCommerce platform, indicating a strong consumer preference and potential for further expansion in related product lines.

10. Revenue from High-Value Products:

The business generates a substantial portion of its revenue from *high-priced products*, emphasizing the importance of maintaining premium offerings and enhancing their visibility.

11. Customer Contribution to Revenue:

Almost 50% of the total revenue is driven by the top 30% of customers. Focusing on customer retention strategies, loyalty programs, and personalized experiences for these high-value customers can further boost profitability.

By leveraging these insights, the eCommerce business can optimize its marketing strategies, inventory planning, and customer engagement efforts to drive sustained growth and profitability.