

Business Insights

Based on the EDA, here are 5 business insights for Customers Dataset:

1. Regional Dominance:

- South America has the highest number of customers (42.5%), followed by North America (30.5%) and Asia (15.5%). This indicates a strong market presence in South America, which could be leveraged for further growth.

2. Signup Growth in 2024:

- The year **2024** saw a significant increase in customer signups compared to previous years. This could be attributed to successful marketing campaigns or expansion efforts during this period.

3. Seasonal Trends:

- Signups peak in **Q1 (January-March)** and **Q4 (October-December)**. This suggests that customers are more likely to sign up during the beginning and end of the year, possibly due to New Year resolutions or holiday promotions.

4. Asia and Europe Growth Potential:

- While South America dominates, Asia (15.5%) and Europe (11.5%) show steady growth in customer signups. These regions present untapped potential for further market penetration.

5. Customer Retention Opportunity:

- A significant portion of customers signed up in **2022**, but there is a decline in repeat signups. Focus on customer retention strategies, such as loyalty programs or personalized offers, to re-engage older customers.

Conclusion:

The analysis highlights key trends and opportunities for business growth. By leveraging regional strengths, seasonal trends, and customer retention strategies, the business can achieve sustained growth and improved customer engagement.

Based on the EDA, here are 5 business insights for Products

Dataset:

1. Category Distribution

- The majority of products belong to the **Electronics** category (**34.0%**), followed by **Books** (**26.0%**) and **Home Decor** (**24.0%**). This indicates a strong focus on Electronics in the product portfolio.

2. Price Distribution

- The **Books** category has the highest average price (**292.94**), while the **Home Décor** category has the lowest average price (**292.94**), while the **Home Décor category has the lowest average price (243.93)**. This suggests that Books are premium products, while Home Decor is more affordable.

3. Most Expensive Products

- The top 5 most expensive products are:
 1. **ActiveWear Jeans** (Category: Clothing, Price: \$429.29)
 2. **ComfortLiving Mystery Book** (Category: Books, Price: \$436.89)
 3. **ComfortLiving Desk Lamp** (Category: Home Decor, Price: \$65.16)
 4. **ActiveWear Wall Art** (Category: Home Decor, Price: \$337.91)
 5. **HomeSense Sweater** (Category: Clothing, Price: \$126.34)
- These products contribute significantly to revenue and should be highlighted in marketing campaigns.

4. Cheapest Products

- The top 5 cheapest products are:
 1. **SoundWave Smartwatch** (Category: Electronics, Price: \$16.08)
 2. **ActiveWear Running Shoes** (Category: Clothing, Price: \$18.82)
 3. **ComfortLiving Laptop** (Category: Electronics, Price: \$26.99)
 4. **ActiveWear Jacket** (Category: Clothing, Price: \$26.26)
 5. **ActiveWear T-Shirt** (Category: Clothing, Price: \$30.59)
- These products can be used to attract price-sensitive customers.

5. Revenue Opportunities

- The **Electronics** category has the highest total revenue potential (**\$9,683.88**), making it a key revenue driver. Focus on expanding this category further to maximize revenue.

Conclusion:

The analysis highlights key trends and opportunities for business growth. By leveraging the strengths of the Electronics category and targeting price-sensitive customers with affordable products, the business can achieve sustained growth and improved profitability.

Based on the EDA, here are 5 business insights for Transactions Dataset:

1. Transaction Trends Over Time:

- The number of transactions peaked in **2024**, indicating a significant increase in customer activity compared to previous years. This could be due to successful marketing campaigns or product launches.

2. Seasonal Trends:

- Transactions are highest in **Q4 (October-December)**, likely due to holiday shopping and end-of-year promotions. This suggests opportunities for targeted marketing during this period.

3. Top Customers:

- The top 5 customers contribute a significant portion of total revenue. These customers should be prioritized for loyalty programs or personalized offers to retain their business.

4. Top Products:

- The top 5 products generate the highest revenue. These products should be highlighted in marketing campaigns and inventory should be optimized to meet demand.

5. Revenue Growth:

- Total revenue has grown steadily over the years, with a significant spike in **2024**. This indicates a healthy business growth trajectory and opportunities for further expansion.

Conclusion:

The analysis highlights key trends and opportunities for business growth. By leveraging seasonal trends, retaining top customers, and optimizing product strategies, the business can achieve sustained growth and improved profitability.