

# Key Business Insights

## 1. Regional Performance

- **South America leads in transactions and revenue:** South America has the highest number of transactions (304) and earned the most revenue (\$219,352.56). This shows that customers in this region are highly engaged and spend more.
- **Asia has the lowest revenue** (\$152,074.97), despite having 218 transactions. The average transaction in Asia is lower, which could mean customers are buying less expensive items or purchasing in smaller quantities.

**Recommendation:** Put more marketing focus on South America to keep growing in that region. In Asia, consider introducing higher-priced products to encourage bigger purchases.

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## 2. Product and Category Insights

- **Best-selling products:**
  - "ActiveWear Smartwatch" (40 sales) and "SoundWave Headphones" (38 sales) are the top sellers. This shows that customers really like electronics.
- **Category performance:**
  - **Electronics** brings in the most revenue, while **Books** sell the most units (681 units sold).
  - **Home Decor** shows steady sales in both revenue and quantity, which means it's consistently popular.

**Recommendation:** Increase stock of Electronics and Books to meet the demand. For Home Decor, consider creating bundles to encourage more purchases.

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## 3. Sales Patterns

- **Monthly Trends:**
  - The highest sales were in July 2024 (\$71,366.39), possibly due to seasonal events or promotions.
  - December 2024 also saw a jump in sales (\$59,049.20), likely from holiday shopping.
- **Yearly Growth:**

- Sales in 2024 (\$686,226.04) were much higher than in 2023 (\$3,769.52), showing that the business is growing quickly.

**Recommendation:** Plan big sales events and promotions in July and December to take advantage of these busy months. Also, continue tracking growth to plan for future resources.

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## 4. Customer Retention and Growth

- **Customer Retention:**

- Most customers have been active for over a year, and many new customers signed up recently (2023-2024). This suggests the business is growing its customer base well.

- **Days Since Signup:**

- A lot of customers have signed up within the last 500 days, meaning the company is still in a phase of strong customer acquisition.

**Recommendation:** Launch loyalty programs to keep newer customers coming back, and start referral programs to encourage your existing customers to bring in new ones.

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## 5. Correlation Between Quantity, Price, and Total Value

- **Correlation analysis** reveals:

- Quantity and TotalValue have a **moderately strong positive correlation (0.61)**, indicating that selling more units directly boosts revenue.
- Price and TotalValue show a **strong positive correlation (0.72)**, meaning higher-priced items significantly impact total revenue.
- Quantity and Price are **almost uncorrelated (-0.009)**, suggesting that the number of units sold is not influenced by item price. This shows that customers prioritize quality or brand reputation over price, leading to steady sales regardless of price. Additionally, the company might cater to a customer base that values specific products and is less price-sensitive.

**Recommendation:** To increase revenue, focus on strategies to drive both higher volumes (e.g., discounts, bundles) and sales of higher-priced products.