# Business Insights

1. Top regions by total transaction value

The bar chart titled "Total Sales by Region" highlights the total sales in USD across various regions. It's clear that South America is the frontrunner, with sales exceeding 200,000 USD. Europe isn't far behind, with sales just over 150,000 USD. Meanwhile, North America and Asia show similar sales figures, both slightly under 150,000 USD. This visualization provides a straightforward view of regional performance, making it easier to identify where the business is thriving. It also helps pinpoint areas to focus on, like boosting marketing efforts or reallocating resources to tap into higher potential regions.
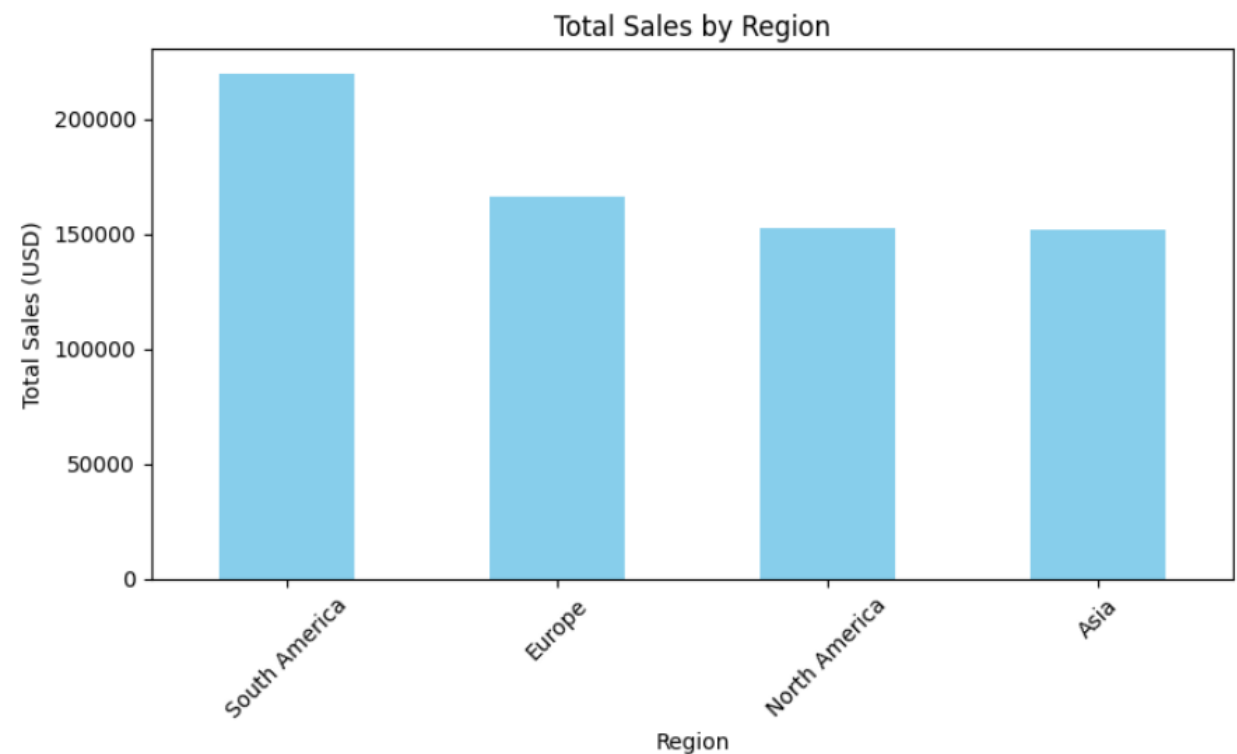

2. Top 5 products by sales volume

Looking at the bar chart titled "Total Sales by Region," it's clear that South America is leading the pack, with total sales exceeding 200,000 USD. Europe is not far behind, with sales just over 150,000 USD. North America and Asia have similar sales figures, both a bit under 150,000 USD. This chart paints a clear picture of how each region is performing, helping me decide where to focus marketing efforts and allocate resources to drive growth where it's needed most.

Top 5 Products by Sales Volume
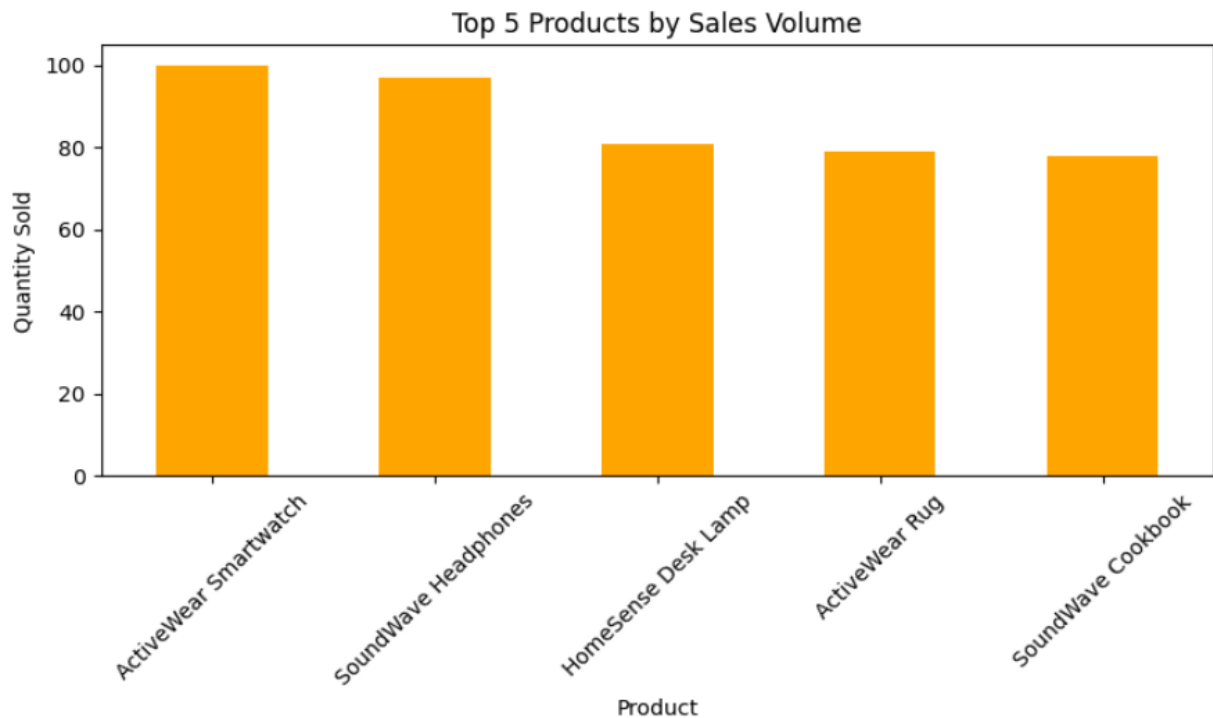
3. Customer signups by year

Looking at the bar chart titled "Customer Signups by Year," I see a compelling story of how customer engagement has evolved over three years. In 2022, there were about 60 signups—a promising start. But in 2023, there's a noticeable drop to around 50, signaling a temporary setback. The real turning point comes in 2024, with a remarkable spike to approximately 75 signups, showcasing strong recovery and growth. This trend highlights initial success, a dip, and then a significant comeback, sparking curiosity about the factors driving these changes and optimism for the future.

Customer Signups by Year
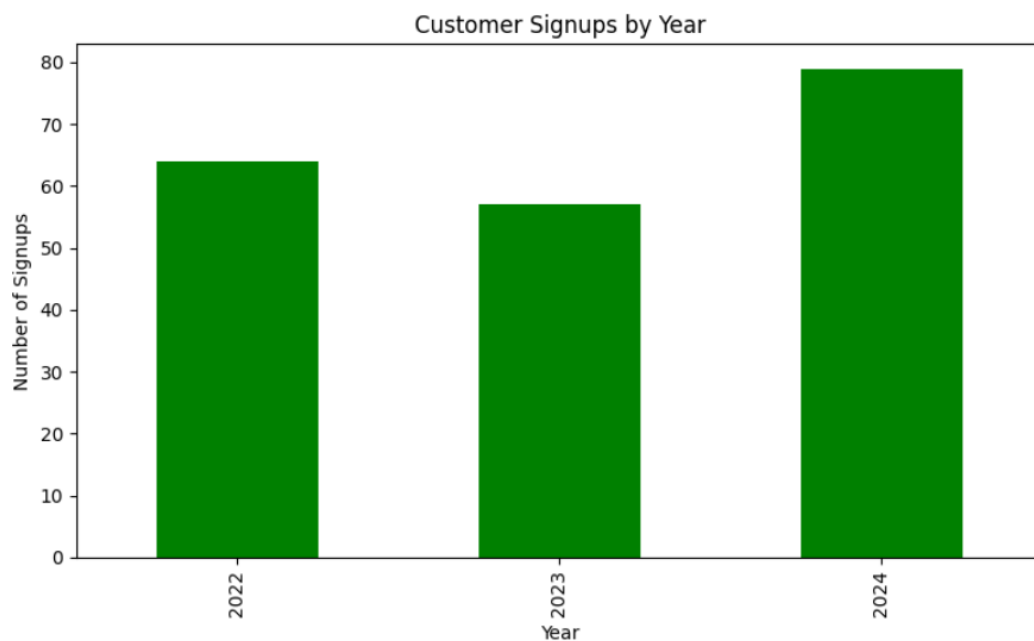
4. Category-wise total revenue

This bar chart, titled "Revenue by Category," offers a clear snapshot of total revenue (in USD) across four categories: Books, Electronics, Clothing, and Home Decor. The y-axis scales from 0 to 200,000 USD, while the x-axis lists the categories with neatly tilted labels for readability. The purple bars make comparisons straightforward. Books dominate, nearing the 200,000 USD mark, while Electronics and Clothing are close contenders with nearly identical revenues. Home Decor, though slightly lower, still achieves a respectable figure just under 150,000 USD. This visual highlights which categories are driving revenue and where opportunities for growth may lie.
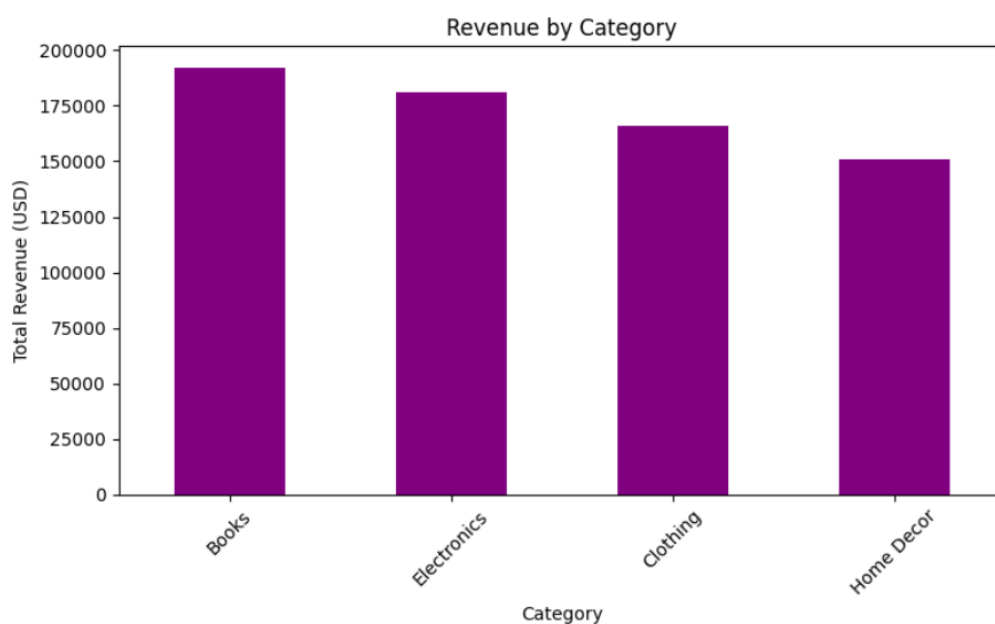
5. Correlation heatmap

When I look at this heatmap, it provides a fascinating visual of the relationships between four variables: Quantity, Price_product, Price_Transaction, and TotalValue. The colors range from blue (negative correlation) to red (positive correlation), with deeper shades indicating stronger relationships.

One key insight is that Quantity has a moderate positive correlation of 0.61 with TotalValue, meaning that higher quantities generally lead to a higher total value. Another standout is the perfect correlation of 1 between Price_product and Price_Transaction, showing these variables are either identical or nearly identical.

This heatmap makes it easy to see how these variables are interconnected, offering valuable insights for analysis and decision-making.

Correlation Heatmap