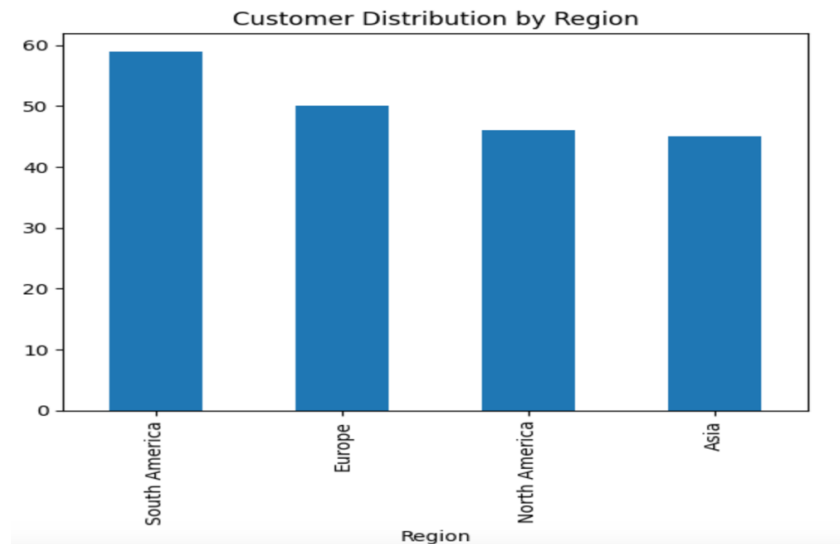


# Exploratory Data Analysis (EDA) Report

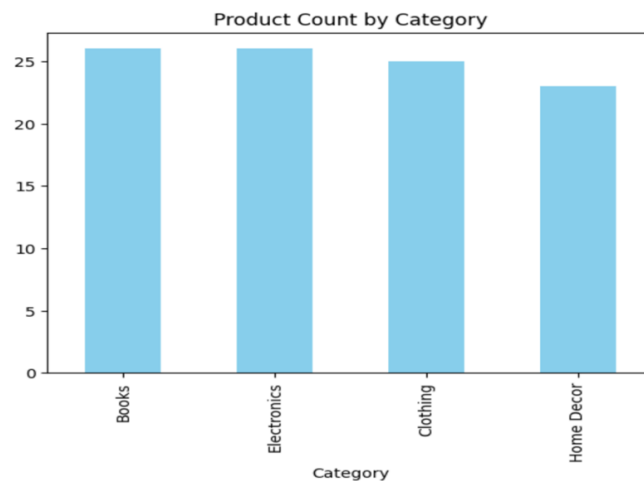
## 1. Customer Data Insights:

- Total customer records analyzed: 200.
- Regions represented: South America, Europe, North America, and Asia.
- South America has the largest customer base (59 customers), followed by Europe (50), North America (46), and Asia (45).
- **Insight:** Customer distribution indicates a strong potential for targeting the South American market for further expansion due to its largest base.



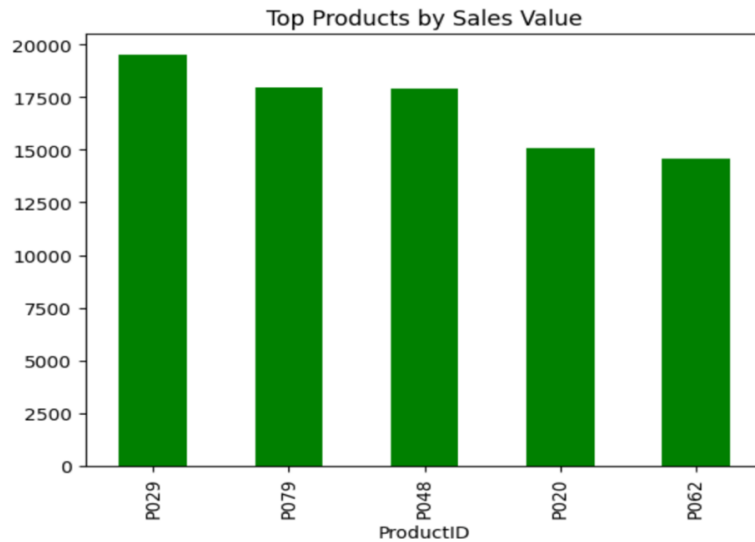
## 2. Product Data Insights:

- Number of products analyzed: 100, categorized into four primary groups: Books, Electronics, Clothing, and Home Décor.
- Most popular categories based on the product count:
  - Books: 26 products.
  - Electronics: 26 products.
  - Clothing: 25 products.
  - Home Décor: 23 products.
- **Insight:** Books and Electronics dominate the product range, suggesting a focus on promoting these categories can yield higher engagement.



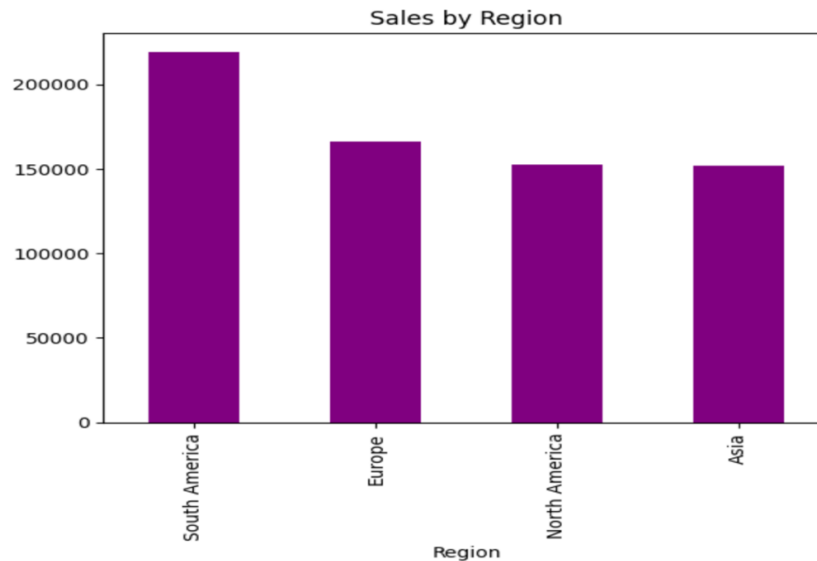
### 3. Transaction Data Insights:

- Total transactions analyzed: 1,000.
- Top Products by Sales Value:
  - **Product P029: \$19,513.80** (Product Name- TechPro Headphones, Category- Electronics).
  - **Product P079: \$17,946.91** (Product Name- ActiveWear Rug, Category- Home Decor).
  - **Product P048: \$17,905.20** (Product Name- TechPro Cookbook, Category- Books).
  - **Product P020: \$15,060.92** (Product Name- ActiveWear Jacket, Category- Clothing).
  - **Product P062: \$14,592.24** (Product Name- HomeSense Novel, Category- Books).
- **Insight:** Electronics contribute significantly to revenue, making them a key driver for profitability.



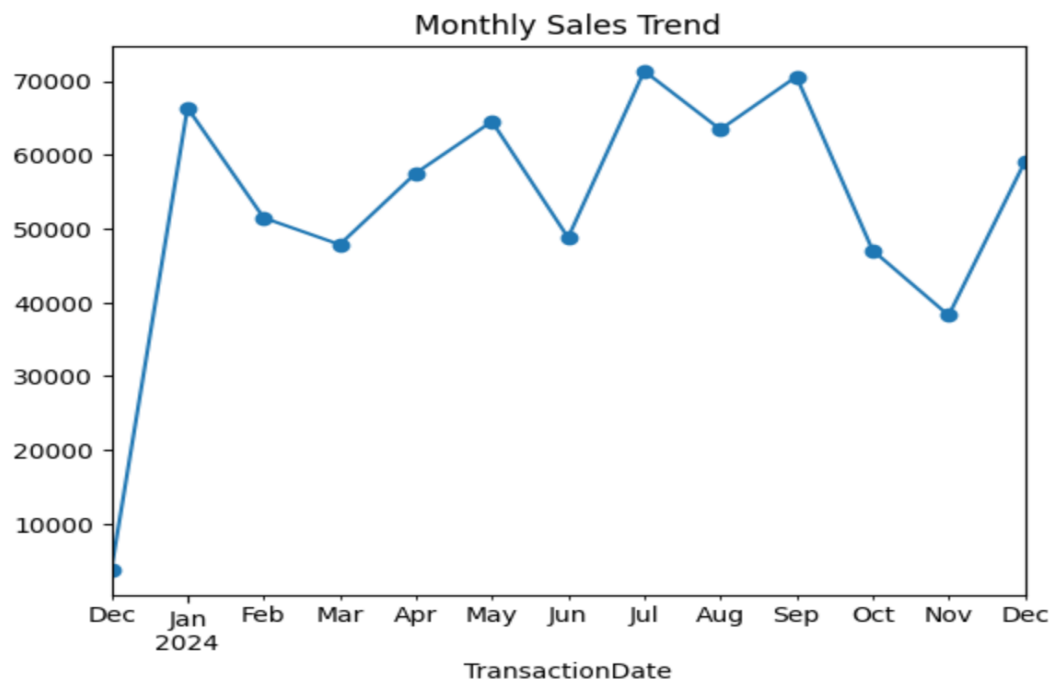
### 4. Regional Sales Performance:

- Highest sales contributions:
  - South America: \$219,352.56.
  - Europe: \$166,254.63.
  - North America: \$152,313.40.
  - Asia: \$152,074.97.
- **Insight:** South America not only has the largest customer base but also leads in sales contribution, reinforcing its status as a high-priority market.



5. Monthly Sales Trends:

- Sales peaked in July 2024 (\$71,366.39), followed by September 2024 (\$70,603.75).
- Lowest sales were observed in December 2023 (\$3,769.52).
- **Insight:** Seasonal trends highlight summer months as peak sales periods, suggesting seasonal promotions could optimize revenue.



Conclusion:

Combining customer demographics, product performance, and sales trends, the South American market and Electronics category emerge as strategic focal points for scaling business efforts.