

Data science Assignment-Zeotap

Exploratory Data Analysis for eCommerce Transactions Dataset



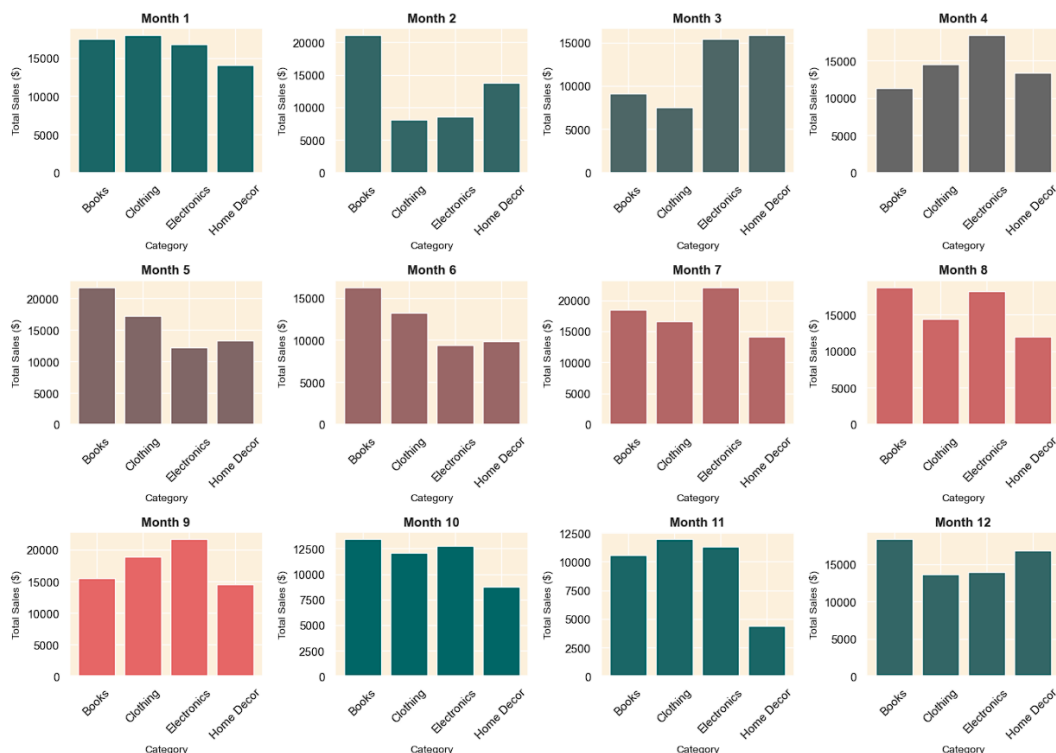
Business insights

Insight - 1

Leveraging Seasonal Trends for Better Sales

Sales patterns reveal key opportunities for growth:

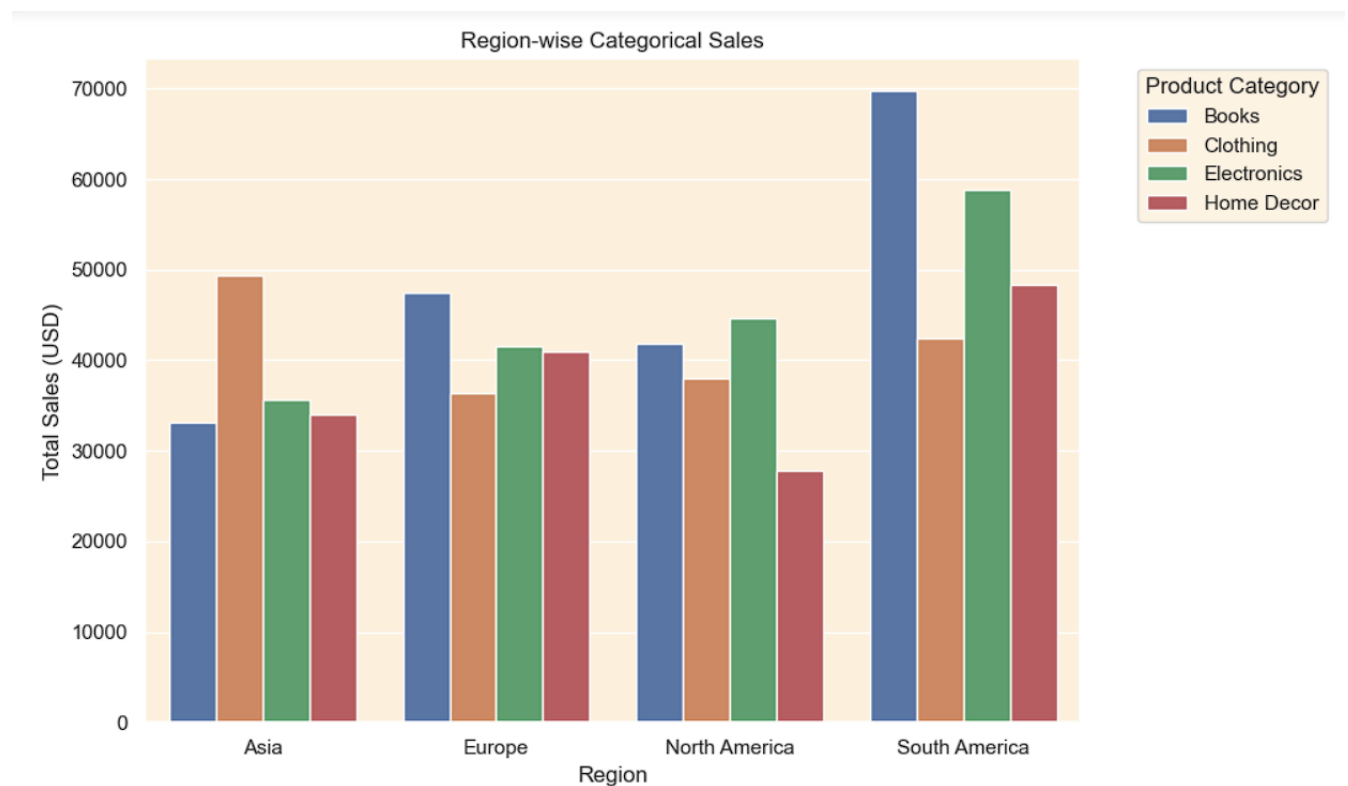
- **Books and Clothing peak in May**, likely due to summer shopping and academic demand.
- **Electronics sell the most in July**, possibly driven by promotions and back-to-school purchases.
- **Home Decor sees low sales most of the year but spikes in December**, fueled by holiday shopping [new year, christmas, etc].
- **Electronics sales are unpredictable**, fluctuating based on promotions and new product launches.
- **November is the slowest month** for sales across all categories.
- **Books remain a steady revenue driver**, with strong sales in May and August.



Insight-2

Sales Insights Across Regions and Categories

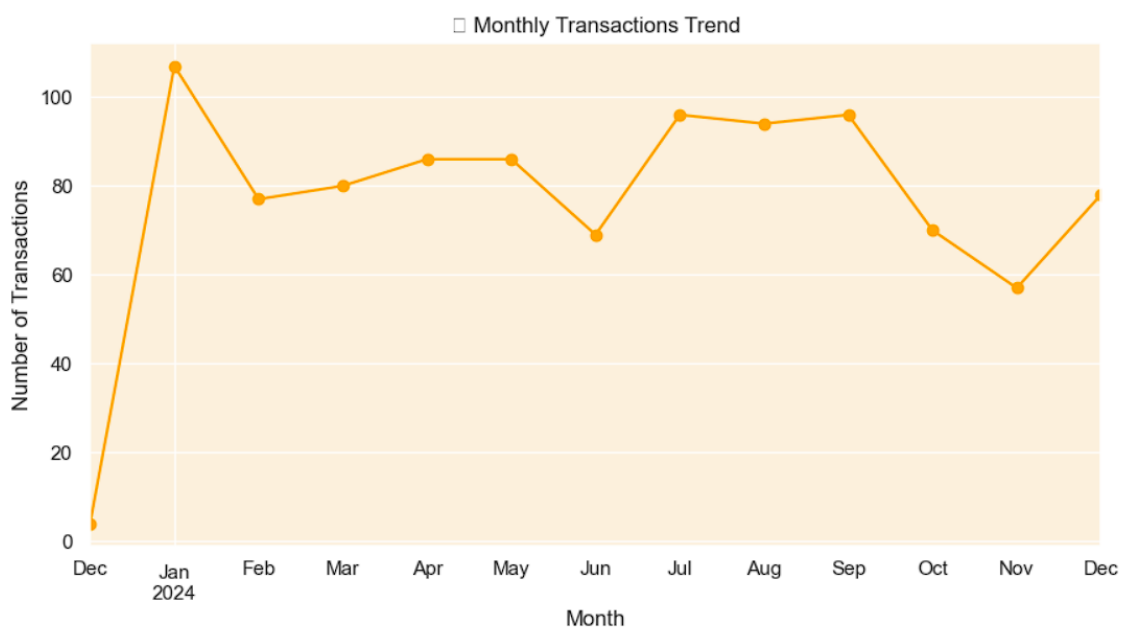
- **South America leads** in total sales **with \$219,352.56**, driven by strong Electronics and Books sales.
- **Books perform well globally**, with South America at \$69,752.03, Europe at \$47,464.42, and North America at \$41,811.99.
- **Clothing** varies regionally, with **Asia leading** at \$49,353.09, followed by North America and Europe at \$38,038.49 and \$36,335.59.
- **Electronics are strong in all regions**, with South America at \$58,846.32, North America at \$44,716.43, and Europe at \$41,562.60.
- **Home Decor performs best in Europe** and South America at \$40,892.02 and \$48,310.72.



Insight-3

Transaction Trends for 2024

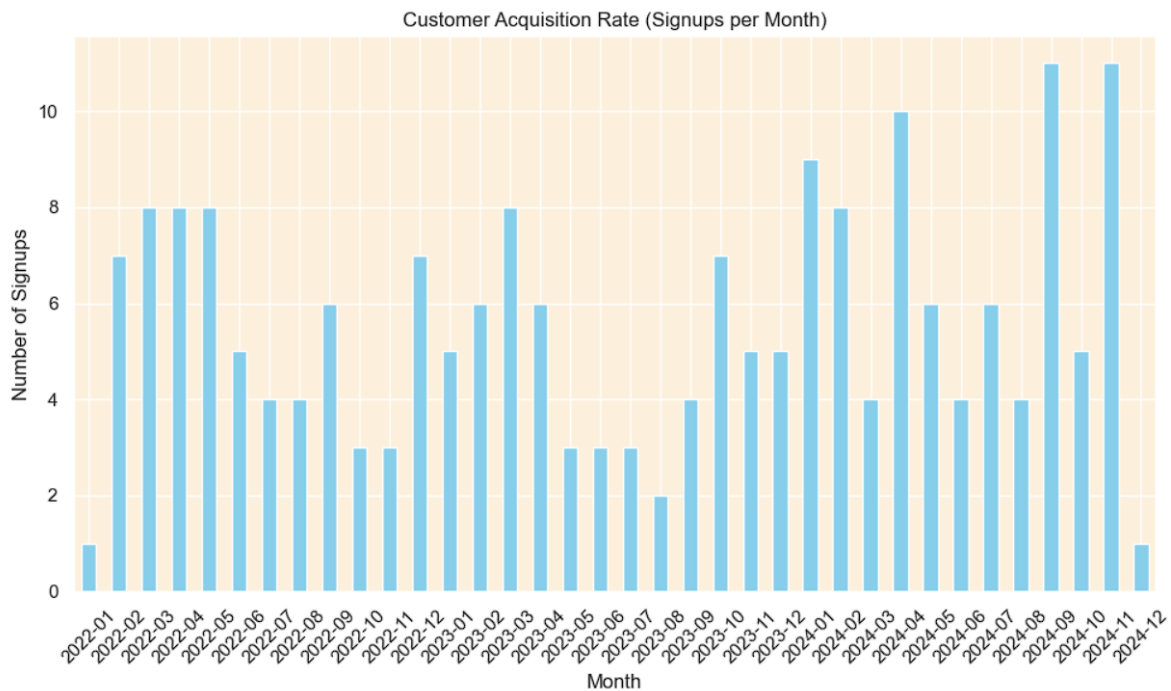
- **January 2024** saw the highest number of transactions, exceeding 100, indicating a strong start to the year.
- **November 2024** recorded the lowest transaction volume, suggesting a potential dip in consumer activity or an off-season.
- **July, August, and September 2024** experienced consistent transaction volumes of over 90, highlighting steady sales during the mid-year months.



Insight-4

Signup Trends Analysis

- **Strong Start to 2024** – Signups peaked in **January (9)**, **February (8)**, and **April (10)**, showing high engagement early in the year.
- **Decline in 2023** – Signups decreased in 2023, especially in mid-year months like **May (3)**, **June (3)**, and **July (3)**, suggesting a dip in user interest.
- **End-of-Year Fluctuations** – **November 2024 (11)** saw the highest signups, while **December 2024 (1)** recorded the lowest, likely due to seasonal factors.



Insight -5

Customer Lifetime Value (CLV) Insights

1. **High-Value Customers** – The top 10 customers have a CLV significantly higher than the average, with **Paul Parsons** leading at \$10,673.87.
2. **Average CLV** – The overall **Average CLV is \$3,449.98**, highlighting a strong base of mid-range customers contributing to total sales.
3. **Targeting Opportunities** – Focusing on high-CLV customers like Bruce Rhodes and Gerald Hines can help optimize customer retention and **loyalty programs** for greater long-term revenue.

	CustomerID	CustomerName	TotalValue
140	C0141	Paul Parsons	10673.87
53	C0054	Bruce Rhodes	8040.39
64	C0065	Gerald Hines	7663.70
155	C0156	William Adams	7634.45
81	C0082	Aimee Taylor	7572.91
187	C0188	Anna Ball	7111.32
58	C0059	Mrs. Kimberly Wright	7073.28
27	C0028	Jennifer Pena	6819.57
98	C0099	Rodney Eaton	6715.72
164	C0165	Juan Mcdaniel	6708.10
Average CLV: 3449.9777999999997			