

# ZeoTap Data Science Assignment: Business Insights Report

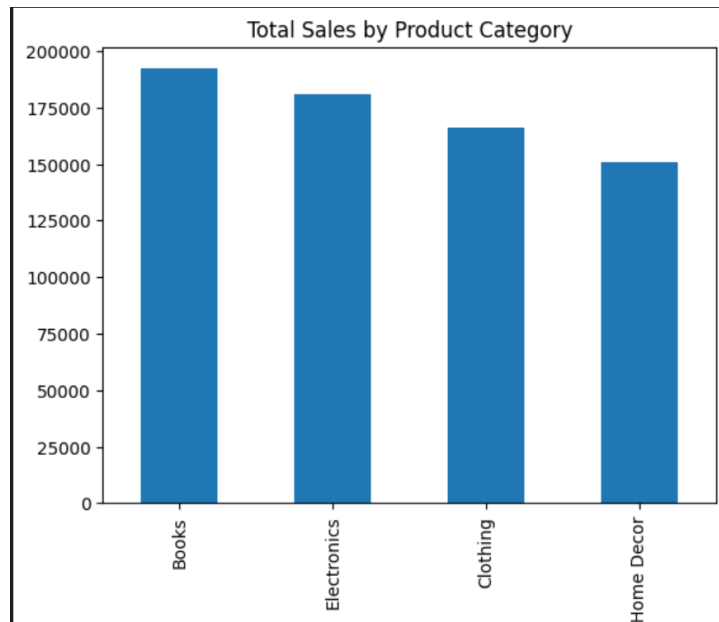
## 1. Regional Distribution of Customers

- Analysis of customer distribution across different regions reveals that **South America (59 customers)** has the highest customer count, followed closely by **Europe (50)**, **North America (46)**, and **Asia (45)**.
- South America is currently the largest market by customer count, indicating a strong user base. However, **Europe and North America have similar customer sizes**, making them potential growth markets for expansion strategies. Tailored marketing campaigns and localized promotions can help drive higher engagement in these regions.



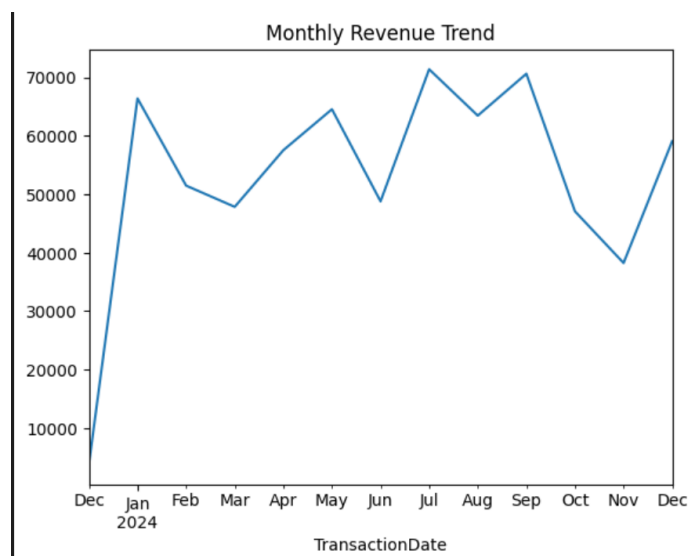
## 2. Category-wise Revenue Contribution

- Among product categories, **Books (\$192,147.47)** contribute the highest revenue, followed by **Electronics (\$180,783.50)**, **Clothing (\$166,170.66)**, and **Home Decor (\$150,893.93)**.
- **Insight:** Books have the highest revenue share, likely due to high purchase frequency and lower return rates. However, Electronics and Clothing categories are **also strong contributors**, suggesting a demand for high-ticket items. Promotional strategies should focus on bundling offers and discounts in these categories to maximize revenue.



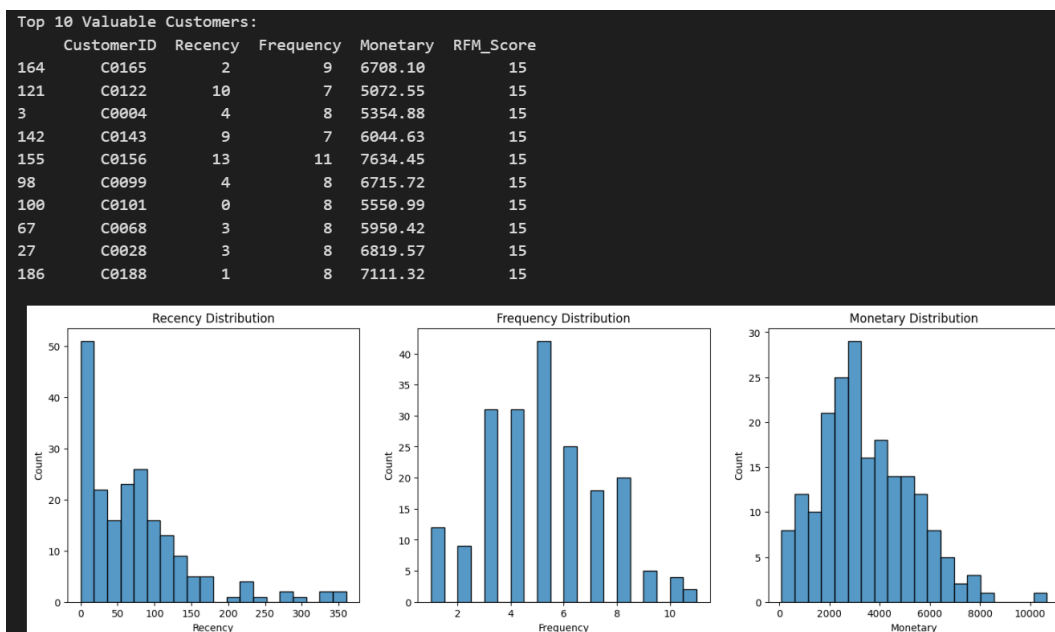
### 3. Monthly Sales Trend

- Sales trends over the past year show **significant revenue fluctuations**. The highest revenue month was **July (\$71,366.39)**, followed by **September (\$70,603.75)**, and **January (\$66,376.39)**.
- **Insight:** The revenue peaks in **July, January, and September** suggest seasonal shopping patterns. **January** sales may be attributed to post-holiday spending, while **July and September** could indicate back-to-school shopping trends. **Implementing seasonal discount campaigns, targeted promotions, and early-bird offers before peak months can optimize revenue.**



#### 4. Identifying Top Valuable Customers (RFM Analysis)

- The **top 10 valuable customers** (based on RFM analysis) exhibit **high purchase frequency, recent transactions, and high monetary contributions**. The most valuable customer, **C0165**, made **9 transactions with a total spending of \$6,708.10**.
- **Insight:** High-value customers are essential for sustaining revenue. **Loyalty programs, early access to new products, and exclusive discounts** should be offered to these customers to enhance retention and lifetime value. **Personalized email campaigns** targeting these customers with product recommendations can further boost engagement.



#### 5. Revenue Contribution from High-Value Customers

- The total revenue generated was **\$689,995.56**
- The **top 10% of customers contribute \$131,829.22 (19.11%)** of total revenue, while the **top 5% alone contribute around \$69,305.21**.
- **Insight:** This aligns with the **Pareto principle (80/20 rule)**—a small percentage of customers drive a significant portion of revenue. **Customer segmentation efforts should prioritize these high-value customers** with premium memberships, special promotions, and VIP services to maintain engagement and drive repeat purchases.

### Top 5% High-Value Customers:

	CustomerID	TotalValue	CumulativeRevenue	RevenuePercentage
140	C0141	10673.87	10673.87	0.015469
53	C0054	8040.39	18714.26	0.027122
64	C0065	7663.70	26377.96	0.038229
155	C0156	7634.45	34012.41	0.049294
81	C0082	7572.91	41585.32	0.060269
186	C0188	7111.32	48696.64	0.070575
58	C0059	7073.28	55769.92	0.080826
27	C0028	6819.57	62589.49	0.090710
98	C0099	6715.72	69305.21	0.100443

