

# EXPLORATORY DATA ANALYSIS

## Overall transaction summary

Mean total value of a transaction is: 689.99 with values ranging from [16.08, 1991.04] with a standard deviation of 493.14.

## Number of unique customers

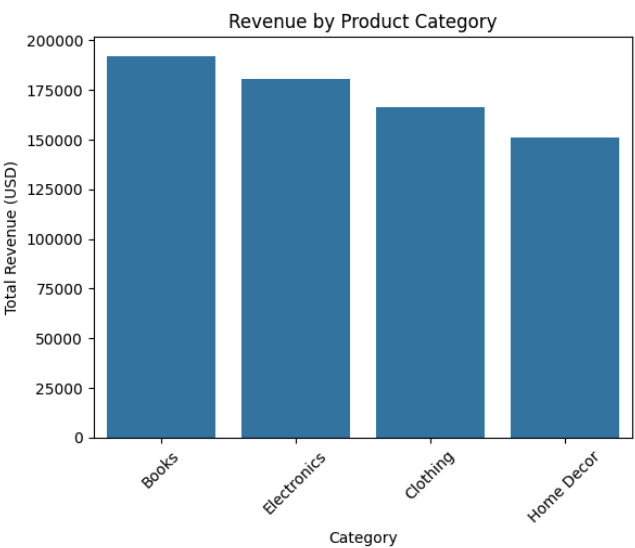
There are 199 unique customers.y. Understanding this count helps assess customer acquisition efforts and the effectiveness of customer retention strategies.

## Customer Retention

Maximum transaction count by a customer is 11, that denotes customer retention.

## Revenue by Product category

Revenue obtained from Books is 192147.47, Electronics is 180783.50, Clothing is 166170.66 and Home Decor is 150893.93 with maximum revenue obtained from books and minimum from home decor. Books generate the most revenue, suggesting it is the top-performing category. Home decor has the lowest revenue, which might imply lower demand or higher competition.



## Most Purchased items

Although maximum revenue is obtained from books, in the category of most purchased products electronics tops the list with top 5 values as the following values:

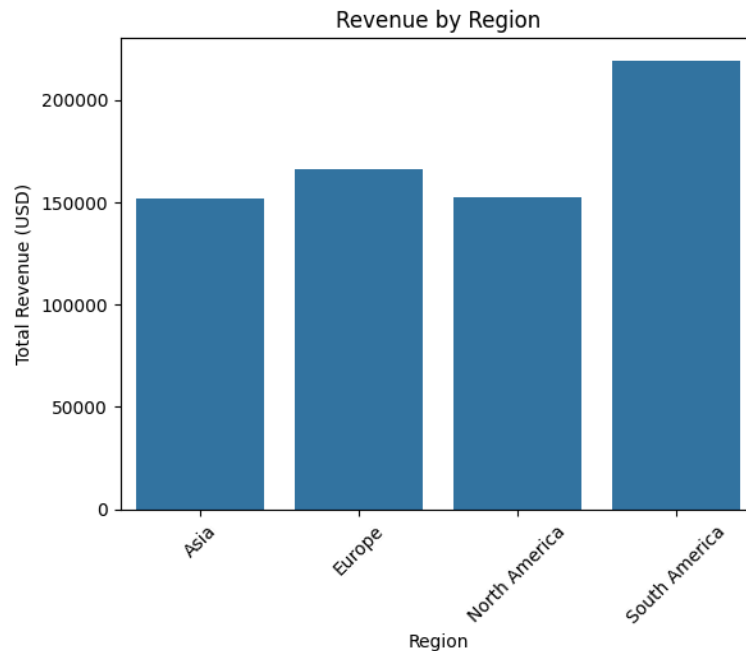
ActiveWear	Smartwatch	100
SoundWave	Headphones	97
HomeSense	Desk Lamp	81
ActiveWear	Rug	79

electronics, can be high-value and have long product lifecycles, leading to one-time purchases. Understanding this helps in planning inventory and marketing for new, innovative products that customers will return to for future upgrades.

**Region wise revenue:**

South America has the highest revenue, followed by Europe, North America, and Asia.

Asia	152074.97
Europe	166254.63
North America	152313.40
South America	219352.56



- **Customer sign ups over time**

Tracking customer signups over time helps measure the effectiveness of marketing campaigns, customer acquisition strategies, and product launches. An increase in signups over time suggests that marketing efforts or product offerings are resonating with customers. A decrease or stagnation in signups could signal a need for reevaluation of strategies.

