**Customer Segmentation Analysis**

**Introduction**

Customer segmentation is the practice of dividing customers into groups based on specific criteria such as demographics, purchase behavior, or preferences. This project utilizes SQL queries to analyze a dataset with 20,000 customer records. By applying basic to advanced SQL techniques, this analysis identifies key customer groups and insights that drive strategic decisions for businesses. Segmentation allows businesses to personalize marketing, optimize customer experiences, and improve profitability.

**Goals of the Analysis**

* Understand customer behavior by analyzing purchase amounts, frequency, and demographics.
* Segment customers into meaningful categories like Loyal, Churned, At Risk, etc.
* Identify high-value customers who contribute the most revenue.
* Analyze location-based trends to find regional performance insights.
* Discover purchasing patterns to optimize marketing strategies.
* Highlight inactive customers for re-engagement campaigns.
* Provide actionable recommendations to boost sales and customer retention.

**Steps for Analysis**

1. Data Understanding

* Retrieve all data and explore column information: names, locations, categories, age, purchase frequency, etc.

1. Basic Analysis

* Count total customers.
* Find distinct customer categories.
* Analyze location distribution.

1. Intermediate Analysis

* Identify high-value customers with purchases > $500.
* Segment customers by purchase frequency and behavior.
* Group data to calculate average purchase amounts.

1. Advanced Analysis

* Rank top customers by purchase amount.
* Analyze age groups and segment customers into brackets (18-25, 26-35, etc.).
* Calculate purchase totals and averages for each location.
* Identify inactive customers who have not purchased in the last year.
* Rank locations by total customers and revenue contribution.

1. Generate Insights

* Interpret SQL results to derive insights.
* Highlight key trends such as regional leaders, top customers, and inactive customer groups.

1. Summarize and Conclude

* Provide a detailed summary of findings and actionable recommendations.

**Summary**

The customer segmentation analysis categorizes customers into distinct groups based on behavior, demographics, and location. By executing a series of SQL queries:

1. Top-performing locations and customers with high purchase amounts were identified.
2. Customer behavior insights, such as average purchase frequency and patterns, were analyzed.
3. Inactive customers were flagged for targeted re-engagement campaigns.
4. Age groups and gender distribution revealed demographic trends.
5. The analysis provided valuable data-driven insights to improve customer targeting, retention, and business strategy.

**Conclusion**

This project successfully segmented the customer base and uncovered key insights to drive decision-making:

* Loyal customers were identified for retention programs.
* High-value regions were highlighted for resource allocation.
* Inactive customers were flagged for reactivation campaigns.
* Age and behavior patterns informed personalized marketing strategies.