Zomato Customer Analysis

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**1. Executive Summary**

This project uses SQL to analyze Zomato customer data to uncover trends, behaviors, and insights critical for improving business strategies. The analysis focuses on exploratory data analysis, customer segmentation, order trends, and performance metrics such as Average Order Value (AOV) and Customer Lifetime Value (CLTV). These insights help identify high-performing regions, popular cuisines, and customer retention patterns.

**2. Introduction**

**Background**:  
Zomato, a leading food delivery platform, generates vast amounts of customer and order data. Understanding this data can help Zomato refine its offerings and improve customer experiences.

**Objective**:  
To analyze customer preferences, trends, and behavior to aid in business decision-making.

**Scope**:  
The project covers customer segmentation, geographical insights, order trends, and restaurant performance. Retention and churn analysis are also key areas of focus.

**3. Dataset Description**

The dataset contains multiple tables:

1. **Orders Table**: Includes details of orders placed, such as order ID, date, and amount.
2. **Customers Table**: Captures customer information like location and demographic data.
3. **Restaurants Table**: Provides details about restaurant names, cuisines, and locations.

Attributes like order dates, order amounts, and customer locations are central to the analysis.

**4. Methodology**

1. **Data Exploration**:
   * Initial exploration to understand dataset structure and relationships.
2. **Customer Segmentation**:
   * Group customers by frequency of orders and spending patterns using aggregate functions like SUM() and COUNT().
3. **Geographical Insights**:
   * Use of joins and filtering to analyze top-performing cities and regions.
4. **Order Trends**:
   * Time-based analysis using date functions to extract monthly or yearly patterns.
5. **Retention and Churn Analysis**:
   * Identification of repeat customers using window functions like ROW\_NUMBER().

**5. Project Implementation**

**Step 1**: Exploratory Data Analysis

* Queried datasets to inspect order frequencies, customer demographics, and restaurant categories.

*SELECT COUNT(\*) AS Total\_Orders, AVG(Order\_Amount) AS Avg\_Order\_Value*

*FROM Orders;*

**Step 2**: Customer Segmentation

* Grouped customers by spending habits and frequency.

*SELECT Customer\_ID, SUM(Order\_Amount) AS Total\_Spend, COUNT(\*) AS Order\_Count*

*FROM Orders*

*GROUP BY Customer\_ID;*

**Step 3**: Geographical Insights

* Identified top-performing regions:

*SELECT Location, SUM(Order\_Amount) AS Total\_Spend*

*FROM Customers c*

*JOIN Orders o ON c.Customer\_ID = o.Customer\_ID*

*GROUP BY Location*

*ORDER BY Total\_Spend DESC;*

**Step 4**: Order Trends

* Monthly order analysis:

*SELECT DATE\_FORMAT(Order\_Date, '%Y-%m') AS Month, COUNT(\*) AS Order\_Count*

*FROM Orders*

*GROUP BY Month*

*ORDER BY Month;*

**Step 5**: Popular Restaurants and Cuisines

* Ranked restaurants based on revenue:

*SELECT r.Restaurant\_Name, SUM(o.Order\_Amount) AS Total\_Revenue*

*FROM Orders o*

*JOIN Restaurants r ON o.Restaurant\_ID = r.Restaurant\_ID*

*GROUP BY r.Restaurant\_Name*

*ORDER BY Total\_Revenue DESC;*

**6. Results and Insights**

* **Geographical Trends**: Cities like Bengaluru and Mumbai generated the highest revenue.
* **Customer Segmentation**: Repeat customers contributed significantly to overall revenue.
* **Order Trends**: Peak ordering periods were identified during weekends and festivals.
* **Top Cuisines and Restaurants**: Multi-cuisine restaurants dominated orders, with North Indian cuisine being most popular.

**7. Discussion**

**Significance**:  
This analysis reveals critical insights for Zomato, such as customer retention patterns and region-specific preferences, enabling better targeting and service improvements.

**Challenges**:  
The analysis relies on accurate and complete data. Missing or inconsistent records could impact results.

**Limitations**:  
Seasonality and external factors (e.g., COVID-19) affecting order trends were not accounted for.

**8. Conclusion**

The Zomato Customer Analysis provided actionable insights into customer behavior, spending trends, and popular restaurant categories. These findings can help Zomato enhance its marketing and operational strategies.

**9. Future Enhancements**

1. **Machine Learning Integration**: Predict customer preferences and churn rates.
2. **Visualization Tools**: Use Tableau or Power BI for dynamic dashboards.
3. **Real-time Analysis**: Enable live tracking of order trends and customer activities.