

Swiggy Case Study Using SQL

Purpose:

The primary objective of this case study is to leverage SQL to conduct a comprehensive analysis of Swiggy's operational and customer data. The goal is to derive actionable insights that can enhance decision-making processes, optimize operations, and improve customer satisfaction.

Aim:

- To understand customer behaviour and preferences.
- To evaluate restaurant performance and identify top performers.
- To analyse delivery efficiency and its impact on customer satisfaction.
- To assess overall revenue and growth trends for the platform.

Description:

1. **Data Overview:** The Swiggy dataset comprises multiple tables, each containing critical information about different aspects of the business:
 - **Delivery_Partner:** Contains details about delivery personnel.
 - **Food:** Provides information on food items and types.
 - **Menu:** Lists prices of items on restaurant menus.
 - **Order_Details:** Includes specifics about each order placed.
 - **Orders:** Captures comprehensive details about orders, including food, delivery, and ratings.
 - **Restaurants:** Contains information about restaurants and their cuisines.
 - **Users:** Holds details about customers.
2. **Key Analytical Questions:** The case study focused on addressing several key business questions through SQL analysis:
 - Count of customers who have not placed any orders.
 - Average price of each food type.
 - Average price of food for each restaurant.
 - Identification of the top restaurant based on the number of orders, both overall and specifically for June.
 - Identification of restaurants with monthly revenue greater than a specified value.
 - Detailed orders with order specifics for a particular customer within a specified date range.
 - Month-over-month revenue growth for Swiggy and each restaurant.
 - Top 3 ordered dishes.
 - Average order value per user.
 - Average rating for each restaurant and delivery partner.

3. SQL Techniques Used: To answer these questions and derive insights, the following SQL techniques were employed:

- **Joins:** To combine data from multiple tables.
- **Ranking and Partition:** To identify top performers and segment data.
- **Rolling Sum and Moving Average:** To analyze trends over time.
- **Descriptive Statistics:** To summarize data and extract key metrics.
- **CTE (Common Table Expression):** To simplify complex queries.
- **DateTime Manipulation:** To handle and analyze date and time data.
- **Sub-Queries:** To perform nested data retrieval.

4. Insights and Results:

- **Customer Insights:** Identified a significant number of customers who registered but did not place any orders, indicating a need for targeted marketing strategies.
- **Top Restaurants:** Identified the top-performing restaurant by order count, both overall and for the month of June, enabling recognition and reward programs.
- **Revenue Analysis:** Highlighted restaurants with significant monthly revenue and overall platform revenue, assisting in financial planning and resource allocation.
- **Order Patterns:** Analyzed order details for specific customers and time frames, offering personalized insights for customer service improvement.
- **Repeat Customers:** Recognized the restaurant with the highest repeat customers, indicating strong customer loyalty.
- **Growth Trends:** Assessed month-over-month revenue growth for Swiggy and individual restaurants, identifying growth opportunities.
- **Popular Dishes:** Identified the top 3 most ordered dishes, informing menu optimization and promotional efforts.
- **Delivery Efficiency:** Evaluated average delivery times and their impact on customer satisfaction, suggesting areas for logistical improvements.
- **Order Volume Patterns:** Identified peak order times and days, aiding in workforce planning and marketing campaigns.
- **Delivery Partner Performance:** Assessed delivery partner performance, including order counts and average ratings, informing incentive programs and performance reviews.

5. Conclusion: The Swiggy case study using SQL provided a wealth of actionable insights that can significantly impact the platform's operational efficiency and customer satisfaction. By leveraging advanced SQL techniques, the analysis not only answered critical business questions but also highlighted areas for strategic improvements, ultimately contributing to Swiggy's growth and success.