Project Report

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Zomato Analytics Dashboard

-- Zomato Food Delivery Data Analysis Using MySQL and Power BI --

INTRODUCTION

The **Zomato Analytics** Dashboard Aims To Provide Insights Into Food Delivery Performance, **Restaurant Performance, Reviews, And Customer Preferences.** It Helps Stakeholders Identify Trends, **Improve Delivery** Operations, And **Enhance Customer Satisfaction.**

zomato

Process

Objectives

- Track order and delivery performance.
- Monitor restaurant reviews and ratings.
- Understand customer behavior and preferences.
- Visualize data for quick decision-making.
- Enhance operational efficiency using key performance indicators (KPIs).

Key Performance Indicators (KPIs)

- Total Orders: Count of orders placed within a selected time frame.
- Average Delivery Time: Average time taken (in minutes) for order delivery.
- Average Order Value (AOV): Total revenue divided by the number of orders.
- Customer Satisfaction (Rating): Average customer rating (scale of 1 to 5).
- Discount Utilization Rate: Percentage of orders with discounts applied.

Visualizations

- Total Orders Trend: A bar chart showing year-wise order volume.
- Delivery Time Analysis: A bar chart showing average delivery time by city.
- Top Restaurants: A horizontal bar chart showing top 10 restaurants based on revenue.
- Customer Ratings Distribution: A pie chart or bar chart showing the breakdown of ratings (1 to 5).
- Cuisine Popularity: A bar chart showing the most popular cuisines based on order count.

Filters

- Date Range: Filter orders, reviews, and revenue by specific date ranges. - City/Location: Filter data based on customer or restaurant locations.
- Cuisine Type: Filter data by selected cuisines (e.g., Indian, Chinese, Italian).
- Rating Range: Filter restaurants or reviews based on ratings (e.g., 3 stars and above).
- Discount Applied: Toggle to view only discounted or non-discounted orders.

Data Sources

- Orders Dataset: Contains details such as Order ID, Customer Name, Location, Restaurant Name, Cuisine, Order Date, Delivery Time, Order Amount, etc.
- Restaurant Dataset: Includes Restaurant Name, Location, Ratings, Reviews, and Cuisine.
- Reviews Dataset: Includes Review Text, Ratings, Review Date, and Customer Feedback.

Dashboard View Specifications

No.	View Name	Description	Required Columns
1.	Total Orders KPI	Displays total orders placed within the selected period.	Order ID
2.	Total Orders Amount KPI	Total revenue from orders.	Order Amount
3.	Avg. Delivery Time KPI	Shows the average delivery time for orders.	Delivery Time
4.	Customer Satisfaction KPI	Displays the average customer rating (1–5), indicating satisfaction level.	Rating
5.	Discount Utilization KPI	Indicates how many orders included a discount.	Discount Applied, Order ID
6.	Total Orders per Restaurant	Displays the number of orders received by each restaurant.	Restaurant Name, Order Amount
7.	Orders Trend By Year	Shows how order volume has changed year by year.	Order Date, Order ID
8.	Customer Satisfaction Count	Displays the number of customers by satisfaction level.	Rating, Order ID
9.	Discount by Region	Displays total discount value distributed by region.	Region, Discount Status
10.	Discount Status(Yes/No)	Shows if a discount was used (Yes) or not (No).	Discount Status, Order ID
11.	Avg. Order Amount by Region	Shows the average order amount for each region.	Region, Order Amount

🔧 Non-Functional Requirements

The developed Power BI dashboard successfully meets all defined non-functional requirements, as outlined below:

✅ Performance
The dashboard loads within 2 to 3 seconds for datasets up to 50,000 rows, ensuring a responsive user experience.

✅ Usability
The dashboard features an intuitive, user-friendly interface, allowing non-technical users to navigate and interpret insights with ease.

✅ Scalability
The solution has been designed to handle datasets up to 1 million rows without noticeable performance degradation, ensuring future growth readiness.

👥 Stakeholders

- **Business Analysts**
  - Analyze key performance metrics to support data-driven decision-making and strategic planning.
- **Operations Team**
  - Monitor delivery efficiency, identify bottlenecks, and optimize logistics and service performance.
- **Marketing Team**
  - Gain insights into customer preferences and purchasing trends to tailor campaigns and promotional strategies.
- **Restaurant Owners**
  - Track restaurant-level performance, order volume, and customer feedback to improve service quality and customer satisfaction.

⚙️ Dashboard Development Process

🔹 Raw Data Collection

• Initial dataset was provided in Excel format, containing Zomato order records including dates, ratings, discounts, and customer feedback Etc.

🔹 Data Import to MySQL

• The Excel file was imported into a MySQL database (zomatodb) where a new table (zomato) was created to store the raw data.

🔹 Data Cleaning with SQL

• Cleaned and transformed the raw data by formatting date fields (Order_Date, Review_Date) into dd-mm-yyyy format.
• Removed irrelevant columns like Review Text and Is_Discount_Applied to reduce data noise.
• Created a new column Discount_Status using SQL logic to mark whether a discount was applied (Yes/No).

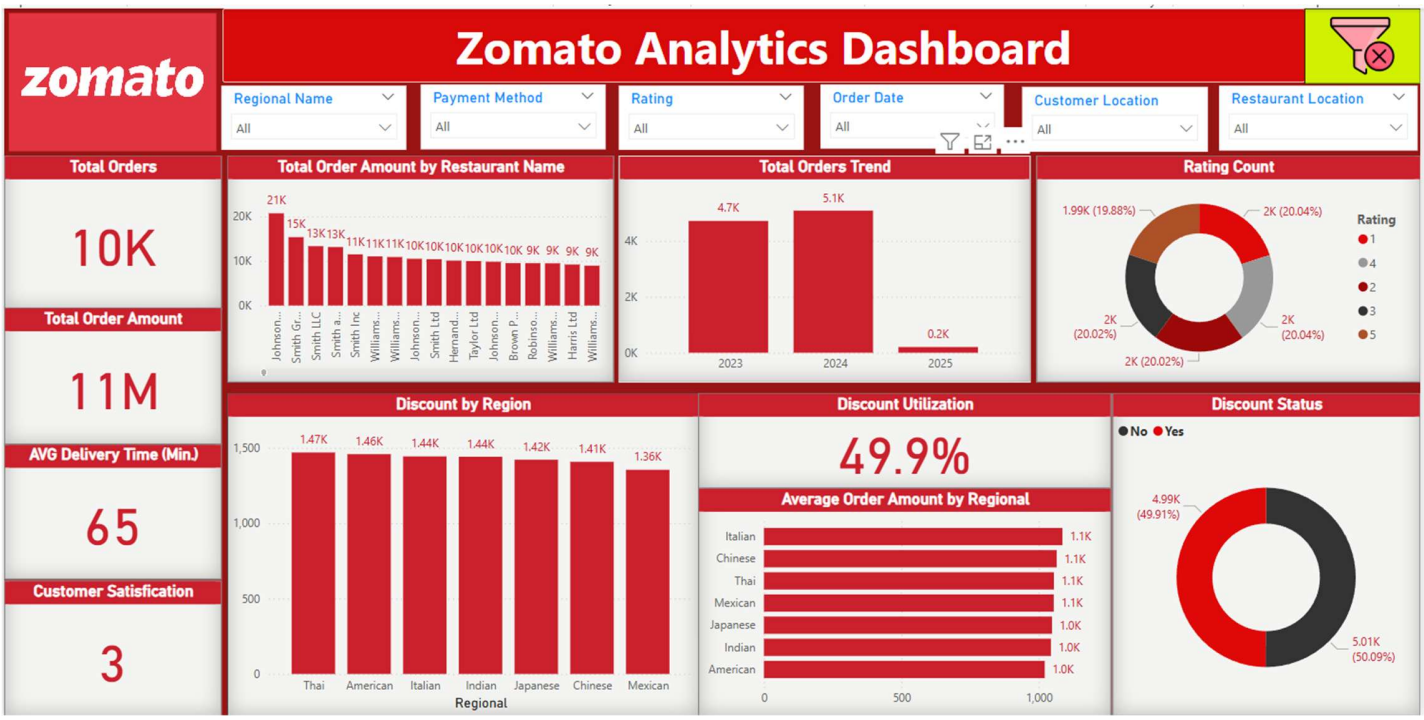
🔹 Power BI Integration

• Connected Power BI directly to the cleaned MySQL database.
• Imported the refined data for visualizations and KPI tracking.

🔹 Dashboard Design & Insights

• Built interactive dashboards featuring KPIs such as Total Orders, Avg. Delivery Time, Discount Utilization, Customer Ratings, and Regional Trends.
• Enabled data slicing by time period, region, and satisfaction level for deeper insights.

Visual Snapshot



📌 Conclusion

The Zomato Analytics Dashboard successfully transforms raw food delivery data into actionable insights through a well-structured ETL pipeline using Excel, MySQL, and Power BI. By analyzing key performance indicators such as total orders, delivery times, customer satisfaction, and discount usage, the dashboard empowers stakeholders to make data-driven decisions. The solution is scalable, user-friendly, and performance-optimized for real-world deployment. This project demonstrates proficiency in data integration, SQL data transformation, DAX-based metric calculation, and effective dashboard design, making it a valuable tool for restaurant operations and strategic planning.