BUSINESS ANALYTICS

MINI PROJECT
On

ZOMATO SALES ANALYSIS

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Abstract:

The Zomato app analysis dataset provides insights into restaurant attributes, customer preferences, and service quality. This study examines 50 restaurant listings, covering parameters such as location, ratings, food categories, pricing, discounts, delivery charges, and service quality. The key findings highlight the impact of factors like rating trends, pricing strategies, and delivery efficiency on customer satisfaction. The dataset also captures aspects like dine-in capacity, payment modes, and special offerings such as happy hours. By leveraging Business Analytics techniques, this analysis aims to identify patterns that can optimize restaurant performance, enhance customer experience, and inform strategic decision-making within the food delivery ecosystem.

Introduction:

The food delivery industry has witnessed rapid growth, with platforms like Zomato revolutionizing customer dining experiences. Understanding key factors influencing restaurant performance, customer preferences, and service quality is essential for both business owners and data analysts. This study utilizes a dataset of 50 restaurant listings from the Zomato app to explore critical aspects such as restaurant ratings, menu diversity, pricing strategies, delivery services, and customer engagement. By analysing these parameters, we aim to uncover patterns that contribute to customer satisfaction, operational efficiency, and competitive advantage in the online food delivery market. This analysis provides valuable insights for restaurant owners, business analysts, and decision-makers looking to optimize service offerings and enhance customer experiences.

Project Objectives

- Data Preparation & Loading: Importing and cleaning sales-related data.
- Building Data Relationships: Connecting multiple datasets for meaningful insights.
- DAX Calculations & Measures: Implementing key performance metrics such as total items sold, average sales.
- Dashboard Creation & Visualization: Designing an interactive dashboard using various chart types, slicers, and KPIs to enhance data interpretation.
- Custom Themes & UI Improvements: Improving dashboard aesthetics by applying custom colors, fonts, and formatting.

This project serves as a practical implementation of Power BI’s capabilities in the financial domain, demonstrating how data-driven decisions can improve sales processes.

Data Collection:

The dataset used for this analysis was collected from the Zomato app, focusing on various attributes of restaurants listed on the platform. The data was gathered based on the following criteria:

1. **Restaurant Information**:
    - Name and location of the restaurant
    - Type of food offered (Veg/Non-Veg)
    - Best-rated food items
2. **Customer Experience Metrics**:
    - Ratings and reviews
    - Delivery service quality
    - Happy hours and discounts
3. **Operational Details**:
    - Number of items available
    - Starting price of food items
    - Delivery charges and dine-in capacity
    - Payment modes (Cash, Online, etc.)
4. **Special Features**:
    - Pets-friendly status
    - Takeaway and dine-in availability

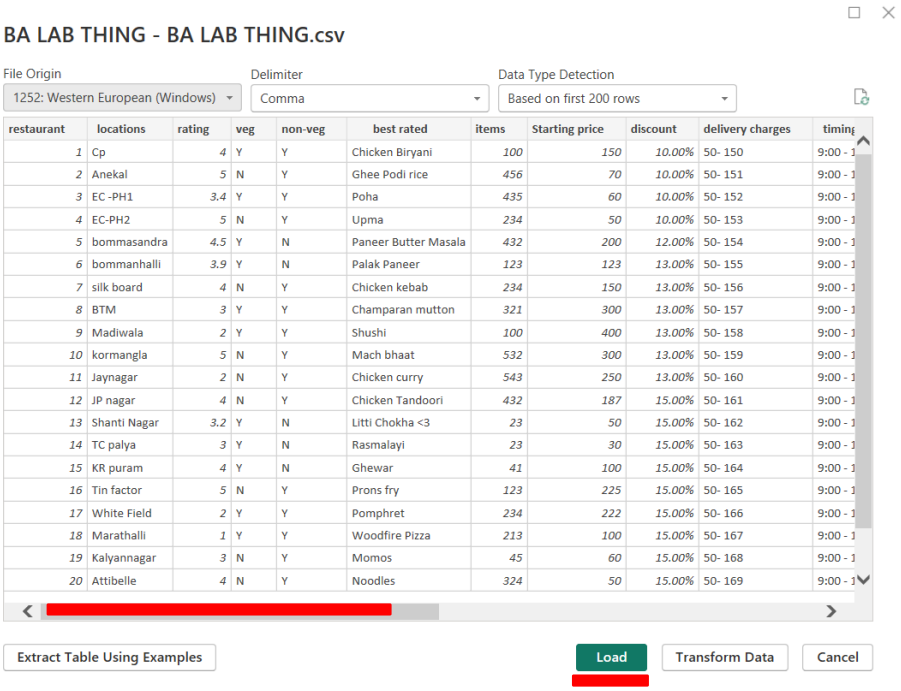
The data was manually extracted from Zomato and Google by observing restaurant listings in different locations. Some values, such as ratings and pricing, were dynamically updated, ensuring the dataset reflects real-world trends in customer preferences and business performance. This dataset forms the foundation for analysing business insights and improving restaurant operations in the competitive food delivery industry.

Data Processing:

The collected metrics such as restaurant, location, and engagement rates and other features are cleaned and analyzed to identify significant trends.

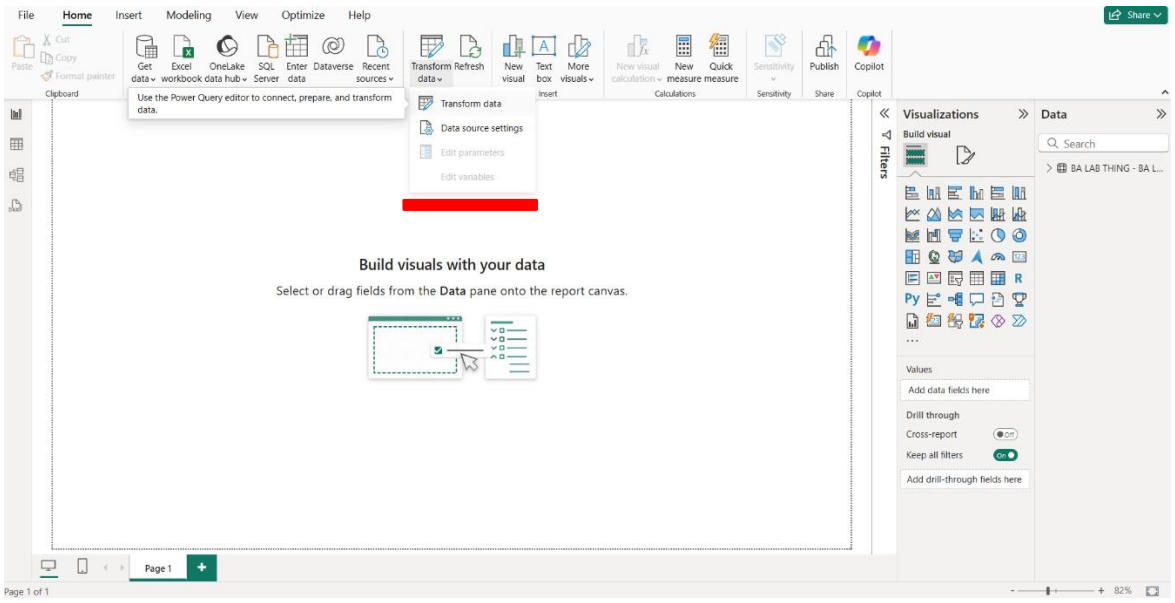
Importing Data into Power BI

1. Open Power BI and import the .csv file containing Zomato data.
2. Load the dataset by selecting the required sheet.
3. Navigate to the **Table View** section to inspect the data structure.



restaurant	locations	rating	veg	non-veg	best rated	items	Starting price	discount	delivery charges	timing
1	Cp	4	Y	Y	Chicken Biryani	100	150	10.00%	50- 150	9:00 - 1
2	Anekal	5	N	Y	Ghee Podi rice	456	70	10.00%	50- 151	9:00 - 1
3	EC -PH1	3.4	Y	Y	Poha	435	60	10.00%	50- 152	9:00 - 1
4	EC-PH2	5	N	Y	Upma	234	50	10.00%	50- 153	9:00 - 1
5	bommasandra	4.5	Y	N	Paneer Butter Masala	432	200	12.00%	50- 154	9:00 - 1
6	bommanhalli	3.9	Y	N	Palak Paneer	123	123	13.00%	50- 155	9:00 - 1
7	silk board	4	N	Y	Chicken kebab	234	150	13.00%	50- 156	9:00 - 1
8	BTM	3	Y	Y	Champaran mutton	321	300	13.00%	50- 157	9:00 - 1
9	Madiwala	2	Y	Y	Shushi	100	400	13.00%	50- 158	9:00 - 1
10	kormangla	5	N	Y	Mach bhaat	532	300	13.00%	50- 159	9:00 - 1
11	Jaynagar	2	N	Y	Chicken curry	543	250	13.00%	50- 160	9:00 - 1
12	JP nagar	4	N	Y	Chicken Tandoori	432	187	15.00%	50- 161	9:00 - 1
13	Shanti Nagar	3.2	Y	N	Litti Chokha <3	23	50	15.00%	50- 162	9:00 - 1
14	TC palya	3	Y	N	Rasmalayi	23	30	15.00%	50- 163	9:00 - 1
15	KR puram	4	Y	N	Ghewar	41	100	15.00%	50- 164	9:00 - 1
16	Tin factor	5	N	Y	Prons fry	123	225	15.00%	50- 165	9:00 - 1
17	White Field	2	Y	Y	Pomphret	234	222	15.00%	50- 166	9:00 - 1
18	Marathalli	1	Y	Y	Woodfire Pizza	213	100	15.00%	50- 167	9:00 - 1
19	Kalyannagar	3	N	Y	Momos	45	60	15.00%	50- 168	9:00 - 1
20	Attibelle	4	N	Y	Noodles	324	50	15.00%	50- 169	9:00 - 1

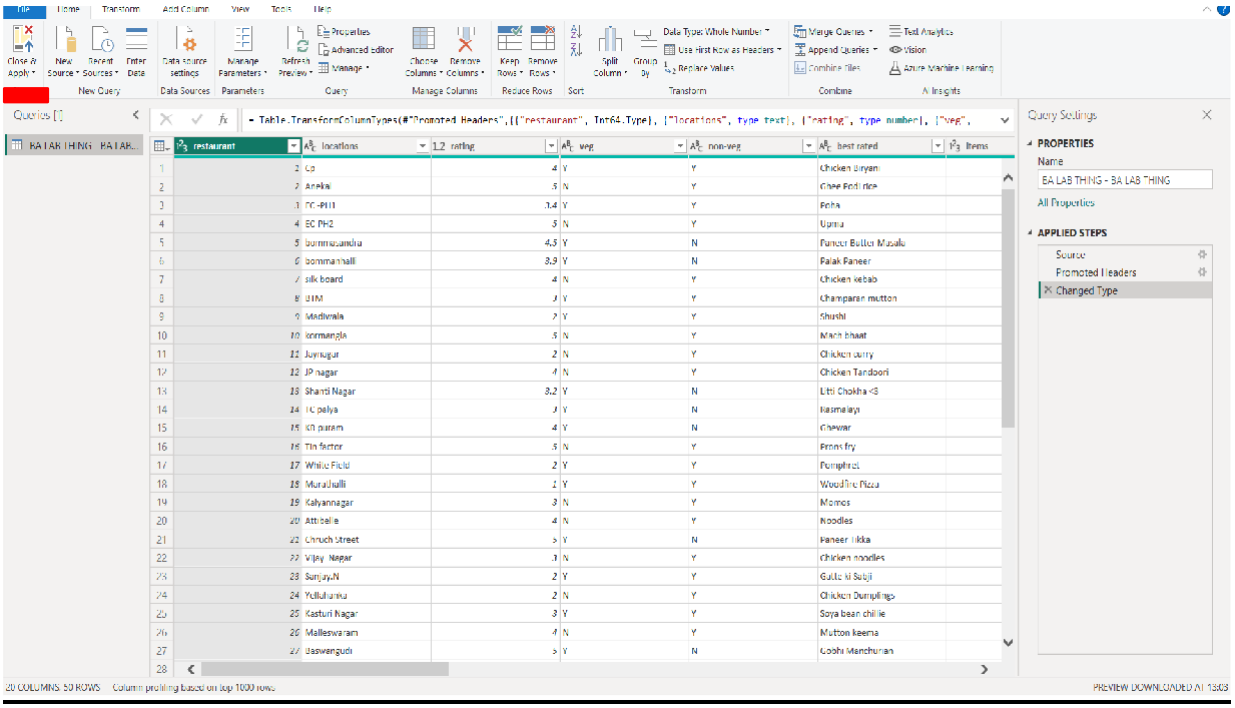
- Go to the **Transform data** section.
- Navigate to the **Data** part and transform it.



In the query editor:

- **Delete unwanted columns** that are not required for analysis.
- **Rename necessary columns** to maintain clarity and uniformity in the dataset.
- Once all modifications are made, select **Copy** to save a backup if needed.

- Finally, click **Apply** to save and implement the changes in the table.



- The data has been cleaned and organized to ensure it's accurate and consistent. Duplicate values have been removed, unwanted columns have been deleted, and the important columns have been renamed for clarity. Now, the data is properly structured and ready for analysis. It's prepared for creating useful charts, graphs, and reports that will offer valuable insights and help in making better decisions.

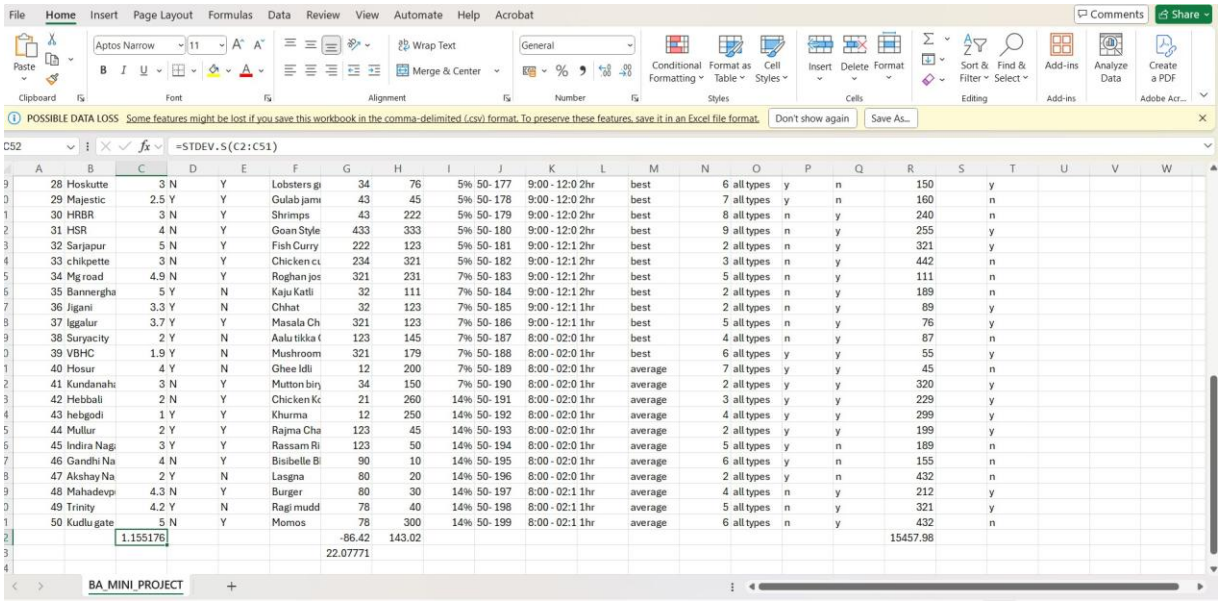
Tables, Columns and Measures

Objective: Creating calculated tables, columns, and measures to enhance data analysis.

Steps:

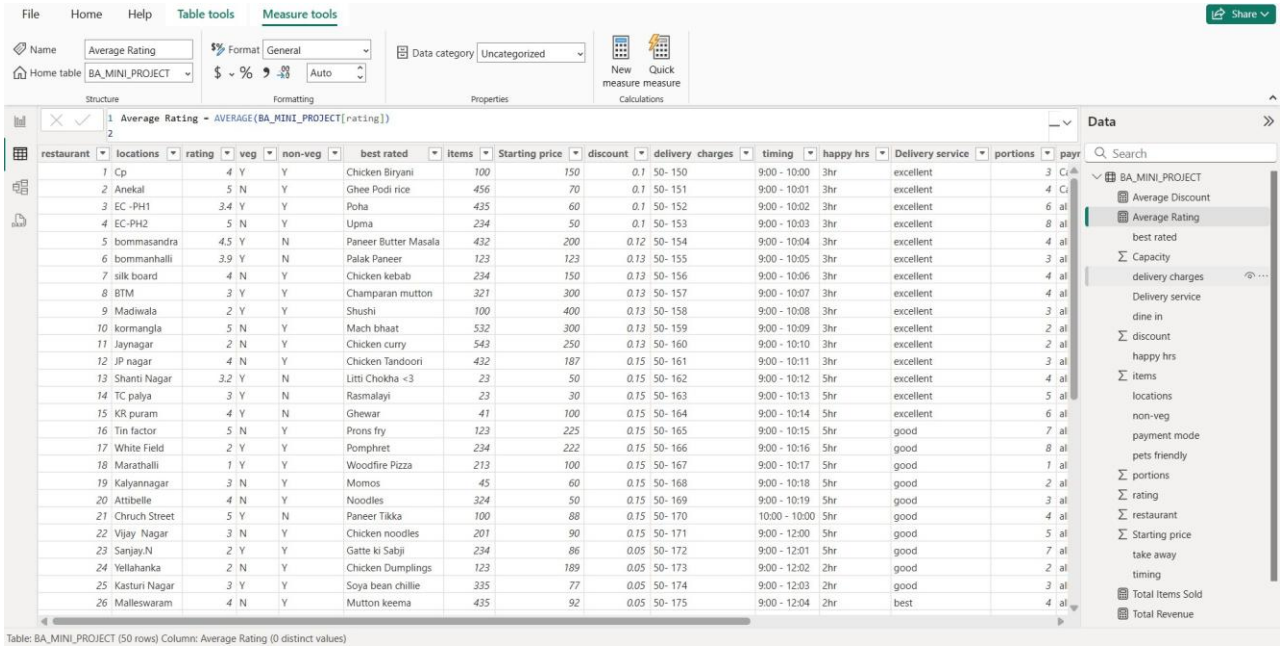
1. **Creating Calculated Columns:**

    - Add a new column for total Sales value: = SUMPRODUCT(G2:G51, H2:H51)
    - Standard deviation of total number of items= STDEV.S(G2:G51)/SQRT(COUNT(G2:G51))
    - Sample Error of total number of items =H2 - AVERAGE(H2:H51)
    - Sample Variance =VAR.S(R2:R51)



2. DAX Measures:

- Average Rating =AVERAGE(BA_MINI_PROJECT[rating])
- Average Discount = AVERAGEX(BA_MINI_PROJECT,VALUE(SUBSTITUTE(BA_MINI_PROJECT[discount], "%", "")))
- Total Items Sold = SUM(BA_MINI_PROJECT[items])
- Total Revenue = SUMX(BA_MINI_PROJECT, BA_MINI_PROJECT[items] * BA_MINI_PROJECT[Starting price])



Building a Complete Dashboard in Power BI Using Different Visualization Techniques

Objective:

Create an interactive dashboard with multiple visualizations.

Steps:

Key Metrics (Cards):

Total sales

Sum of Capacity

Average rating

- **Bar Chart:** Sum of portions by Sum of Capacity.
- **Pie Chart:** Sum of Restaurant by Sum of Locations
- **Line Chart:** Average of Delivery Charges

- **Table Visualization:** Detailed Sales Analysis

- **Filters & Slicers:**

    - Sales Status

    - Location

    - Customer Best Rated

Tools Used:

- **Microsoft Excel:** Used for organizing, cleaning, and analyzing raw data to derive insights.
- **Business Intelligence (BI) Tools:** Platforms such as Tableau or Power BI help create interactive dashboards for a clearer understanding of advertising performance.

Conclusion:

The Zomato data analysis using Power BI has provided valuable insights into various aspects of the restaurant and food delivery business. Through interactive visualizations and key metrics, we have identified significant trends in customer preferences, order patterns, and restaurant performance across different locations.

Key findings from the analysis include:

- **Customer Demographics:** Insights into popular cuisine types based on customer age, location, and spending behavior.
- **Restaurant Performance:** Identification of high-performing restaurants based on ratings, reviews, and order volumes, along with areas where improvements can be made.
- **Order Trends:** A detailed breakdown of order frequency, peak hours, and seasonal fluctuations, enabling better resource allocation and inventory planning.
- **Customer Satisfaction:** Analysis of review ratings and comments, helping pinpoint factors that influence customer satisfaction.

By leveraging Power BI’s interactive dashboards, the data can be continuously updated to track performance, make data-driven decisions, and refine strategies to enhance customer experience and business profitability.