Tech Saksham

Case study report

Data Analytic with Power BI

“360 -degree Business Analysis of Online Delivery Apps Using Power BI”

“A.P.C MAHALAXMI COLEGE FOR WOMEN”

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ABSTRACT

Online food delivery system is mainly designed primarily function for use in the food delivery industry. This system will allow hotels and restaurants to increase online food ordering such type of business. The customers can be select food menu items in just a few minutes. In the modern food industries allows to quickly and easily delivery on customer place. Its is a system that enables customer of food to place their order online at any time at any place. It provides user friendly web-pages and effective advertising medium to the new product of the online food ordering restaurant to the customer at reasonable price. The required of Online Food Ordering System is to automate the existing manual system by the help of computerized equipment's and full-fledged computer software, fulfilling their requirement, so that their valuable data can be stored for a longer period with easy accessing and manipulation of the same. A food delivery app is a restaurant take out or online delivery app that effectively and efficiently connects the restaurant with customers, convenience stores and much more.

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CHAPTER 1

INTRODUCTION

1.1 Problem Statement

Whenever we visit any restaurant or a food shop then we generally have an issue of waiting queue that most of us are not used to entertain and, Now-a-days generally customers prefer their food to be delivered online at their home safely. Through our system the customers would be easily able to place orders as they like using the online meal ordering system, which sets up a food menu online. Online shoppers can also simply track their orders. The management keeps the customer information up to date and enhances the meal delivery service. Additionally, this system has a feedback feature that allows users to rank the food products. Additionally, the suggested system can suggest restaurants and hotels based on the ratings provided by the user. The hotel personnel will also be advised of any quality and improvement issues.

1.2 Rationale:

There are several good reasons to create an online food ordering application. There is a lot of demand, which is why so many restaurants are utilizing online ordering. Customers enjoy how convenient it is to purchase food online and have it delivered to their place of residence or workplace. By providing the services, we may maintain your competitiveness in the restaurant

1.3 Objectives:

The management of the information regarding item category, food, delivery address, order, and shopping cart is the system's primary goal. It oversees the management of all customer, shopping cart, and item category information. Since the project was entirely developed on the administrative end, only the administrator is assured access. The goal is to develop an application program to simplify managing the food consumer item category. It keeps note of every delivery address requested.

1.4 Needs of Online Food Order:

Helping customers in placing meal orders whenever they want. Customers will be able to order their preferred foods at any time, but as we've already mentioned, this is only a limited option. As a result, restaurants need to have a specific system in place that will allow them to serve a large number of customers while streamlining operations. One of the best platforms is ordering, which offers all of these services in addition to a host of cutting-edge features that have helped countless small and large enterprises establish themselves as market leaders.

1.5 Functionalities:

• Provides search options based on a variety of criteria. like Food Item, Customer, Order, and Order Confirmation.

• Online food ordering systems also manage payment information for order details, order confirmation details, and food items online.

• It keeps track of all the data regarding Categories, Payments, Orders, etc.

• Manage the category's details.

1.6 Advantages:

- An improved customer experience
- Streamlined restaurant operations
- Increased transaction amounts
- Easier process for placing large orders
- More accurate orders
- Fewer abandoned orders
- The ability to collect customer data
- Mobile ordering for busy customers
- Catering request approval capabilities
- Expanded reach

1.7 Scope of Online Delivery System:

The purpose of Online Food Ordering System is to automate the existing manual system by the help of computerized equipment's and full-fledged computer software, fulfilling their requirements, so that their valuable data/information can be stored for a longer period with easy accessing and manipulation of the same.

CHAPTER 2

SERVICES AND TOOLS REQUIRED

2.1 Service Used

- Sales forecasts ML applications goal is to reduce costs and inefficiencies in the supply chain level. I t uses as input sell-in and sell-out information, price, price elasticity, market demand proxies to generate production and stock quantity suggestions to maximize sell-out while reducing cost and avoiding food waste.
- Product suggestion ML applications goal is well, to suggest food that you might like to order based on preferences, on-site navigation, previously ordered items and more. The final goal of the services of course is to sell more.

2.2 Tools and Software Used

Tools:

- **PowerBI**: The main tool for this project is PowerBI, which will be used to create interactive dashboards for real-time data visualization.

- **Power Query**: This is a data connection technology that enables you to discover, connect, combine, and refine data across a wide variety of sources.

Software Requirements:

- **PowerBI Desktop**: This is a Windows application that you can use to create reports and publish them to PowerBI.

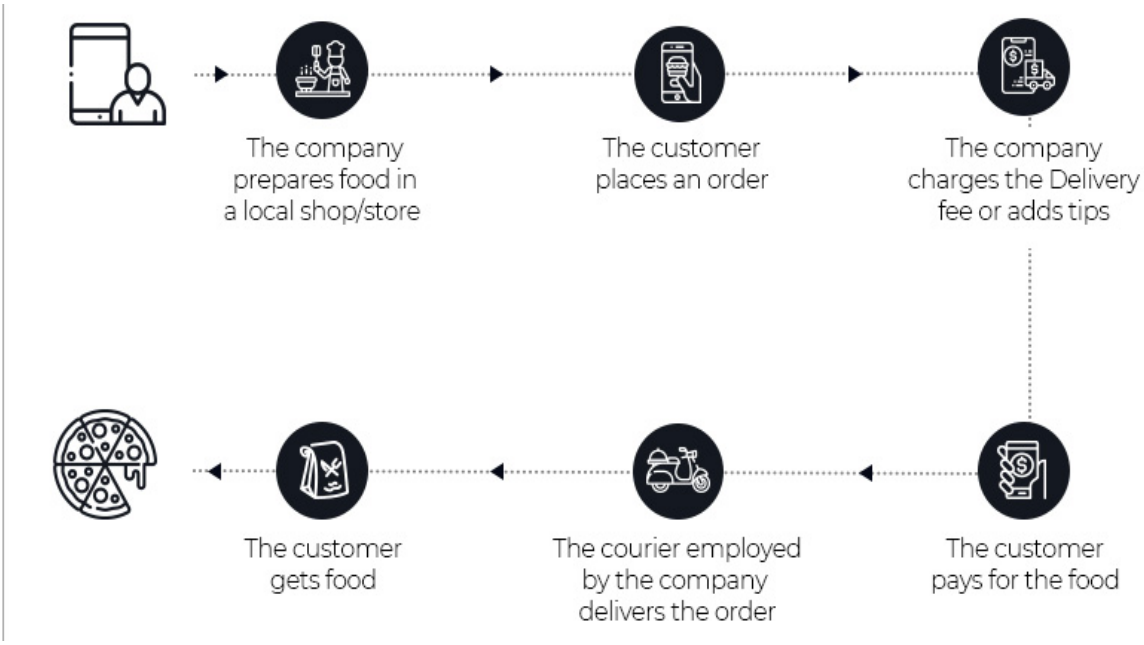
- **PowerBI Service**: This is an online SaaS (Software as a Service) service that you use to publish reports, create new dashboards, and share insights.

- **PowerBI Mobile**: This is a mobile application that you can use to access your reports and dashboards on the go.

CHAPTER 3

PROJECT ARCHITECTURE

3.1 Architecture



We must consider a few important design principles while architecting any system. Here, I have listed in the context of the Online Food Delivery System that we will be architecting.

1. **Scalability:** The system should be able to handle a large number of concurrent users and orders.
2. **Reliability:** The system should be highly available and able to handle failures without disrupting service.

3. Performance: The system should be designed to handle high throughput and low latency to provide fast response times.

4. Security: The system should protect sensitive customer and financial information.

5. Data Management: The system should be designed to handle large amounts of data and provide efficient data access and querying.

6. Flexibility: The system should quickly adapt to changes in menu items, pricing, and delivery options.

7. User-friendly: The front end should be easy to navigate and understand for customers of all ages and technical proficiency.

8. Real-time tracking: The system should provide real-time information about the status of orders and deliveries to customers and delivery partners.

9. Integration: The system should integrate with payment gateways and other relevant services like map and location tracking.

10. Personalization: The system should personalize the user experience by providing personalized recommendations and offers.

11. Automation: The system should be designed with automation in mind to minimize the need for manual intervention and increase efficiency.

12. Monitoring and Analytics: The system should include monitoring and analytics capabilities to gain insights into system usage and performance.

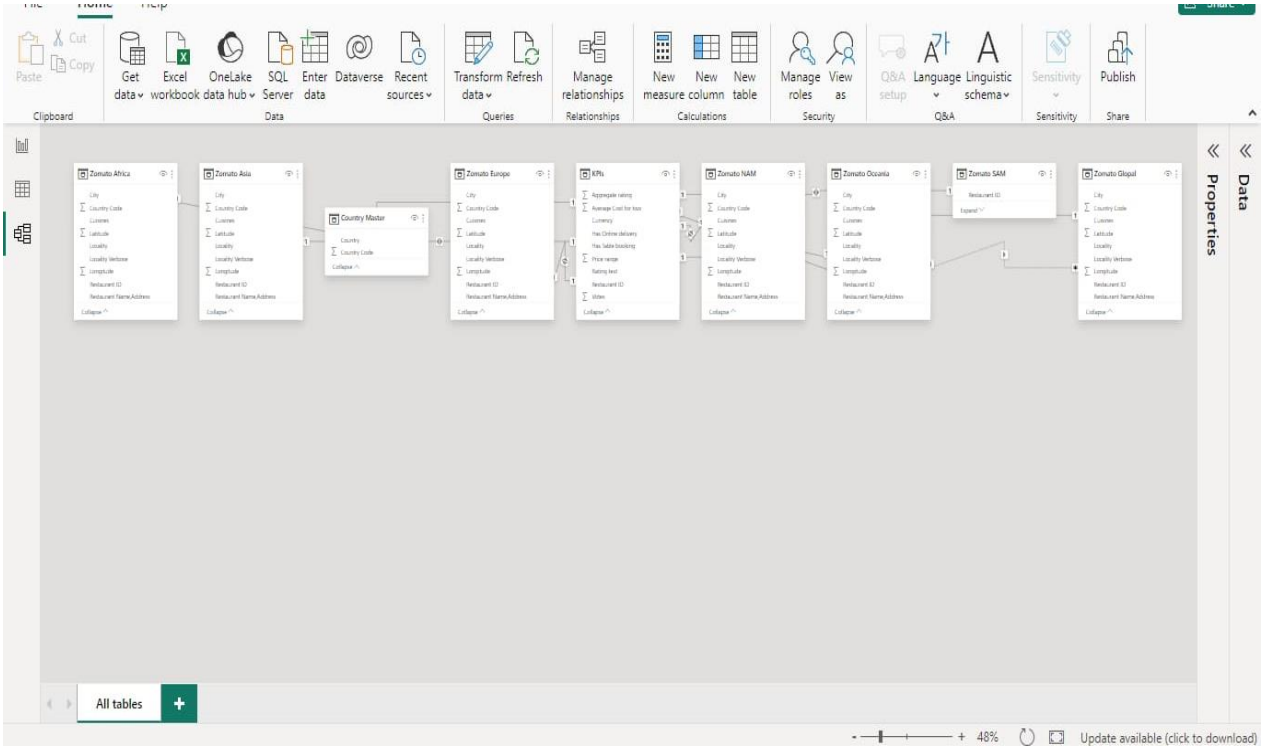
13. Disaster Recovery: The system should include a disaster recovery plan to ensure business continuity in case of unexpected outages or failures.

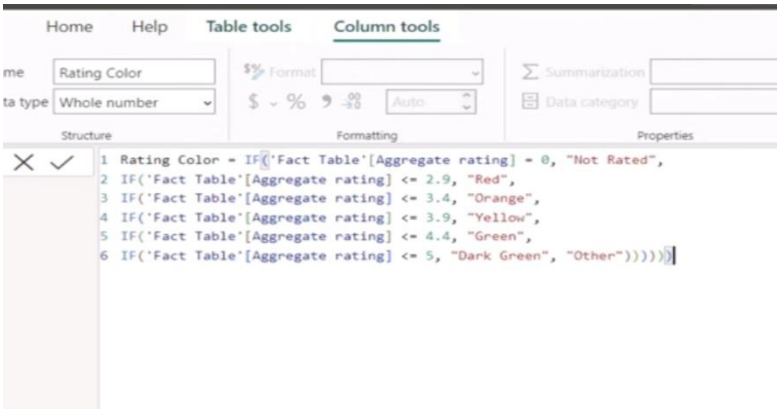
CHAPTER 4

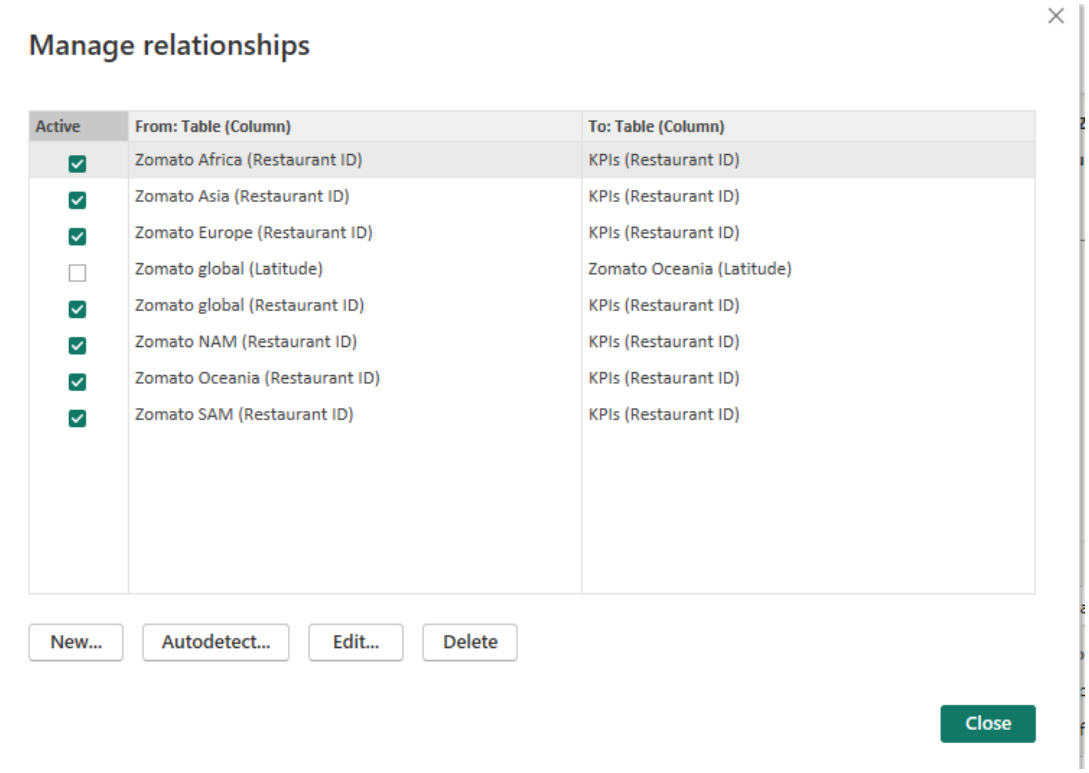
MODELING AND RESULTING

Manage Relationship:

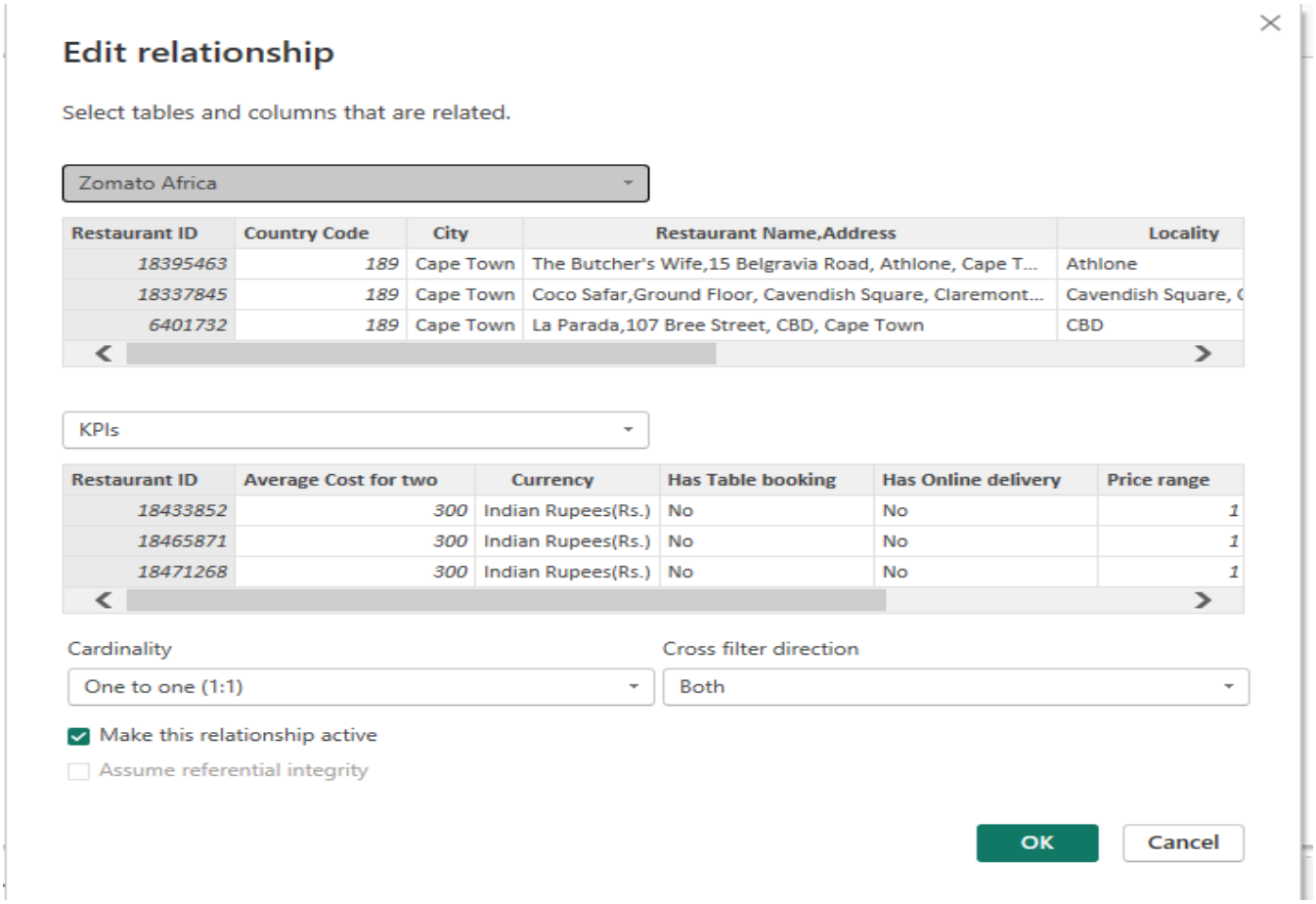
1. Import the data from all available excel files.
2. Data Transformation.
3. Remove any column that aren’t being used.


Home
Help
Table tools
Column tools
Clipboard
Data
Queries
Relationships
Calculations
Security
Q&A
Sensitivity
Share
Properties
Data
All tables
48%
Update available (click to download)

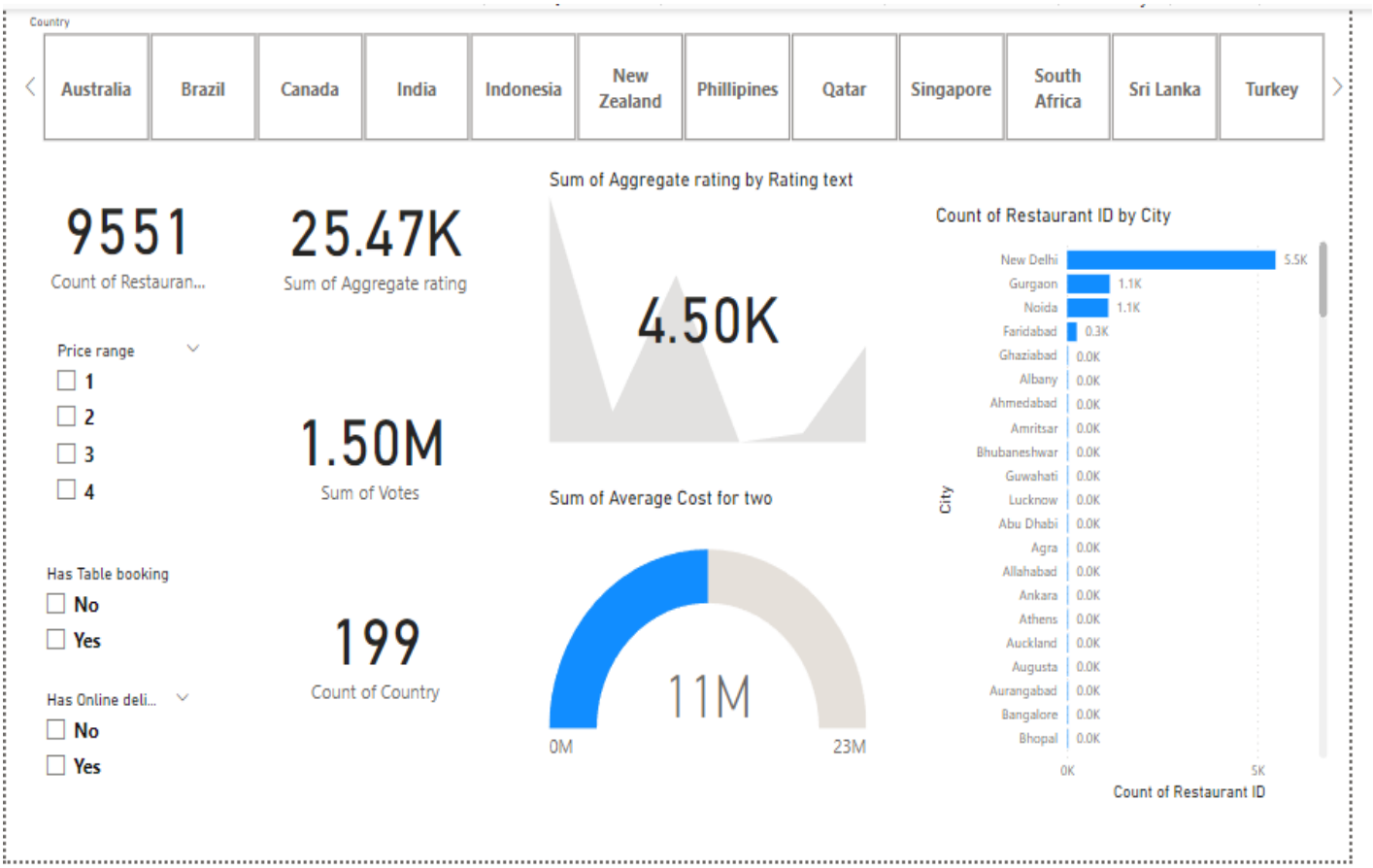

Home
Help
Table tools
Column tools
Rating Color
Whole number
Structure
Formatting
Properties
Rating Color = IF('Fact Table'[Aggregate rating] = 0, "Not Rated",
IF('Fact Table'[Aggregate rating] <= 2.9, "Red",
IF('Fact Table'[Aggregate rating] <= 3.4, "Orange",
IF('Fact Table'[Aggregate rating] <= 3.9, "Yellow",
IF('Fact Table'[Aggregate rating] <= 4.4, "Green",
IF('Fact Table'[Aggregate rating] <= 5, "Dark Green", "Other")))))


Manage relationships
Active
From: Table (Column)
To: Table (Column)
Zomato Africa (Restaurant ID)
KPIs (Restaurant ID)
Zomato Asia (Restaurant ID)
KPIs (Restaurant ID)
Zomato Europe (Restaurant ID)
KPIs (Restaurant ID)
Zomato global (Latitude)
Zomato Oceania (Latitude)
Zomato global (Restaurant ID)
KPIs (Restaurant ID)
Zomato NAM (Restaurant ID)
KPIs (Restaurant ID)
Zomato Oceania (Restaurant ID)
KPIs (Restaurant ID)
Zomato SAM (Restaurant ID)
KPIs (Restaurant ID)
New...
Autodetect...
Edit...
Delete
Close

Edit Relationship



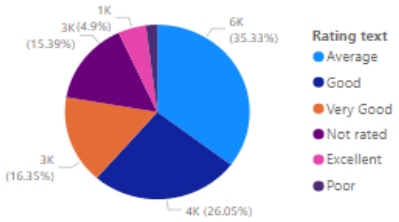
DASHBOARD


Country
Australia
Brazil
Canada
India
Indonesia
New Zealand
Phillipines
Qatar
Singapore
South Africa
Sri Lanka
Turkey
9551
Count of Restauran...
25.47K
Sum of Aggregate rating
1.50M
Sum of Votes
199
Count of Country
Price range
1
2
3
4
Has Table booking
No
Yes
Has Online deli...
No
Yes
Sum of Aggregate rating by Rating text
4.50K
Sum of Average Cost for two
11M
0M
23M
Count of Restaurant ID by City
New Delhi 5.5K
Gurgaon 1.1K
Noida 1.1K
Faridabad 0.3K
Ghaziabad 0.0K
Albany 0.0K
Ahmedabad 0.0K
Amritsar 0.0K
Bhubaneshwar 0.0K
Guwahati 0.0K
Lucknow 0.0K
Abu Dhabi 0.0K
Agra 0.0K
Allahabad 0.0K
Ankara 0.0K
Athens 0.0K
Auckland 0.0K
Augusta 0.0K
Aurangabad 0.0K
Bangalore 0.0K
Bhopal 0.0K
City
0K
5K
Count of Restaurant ID

Microsoft edunet foundation SAP

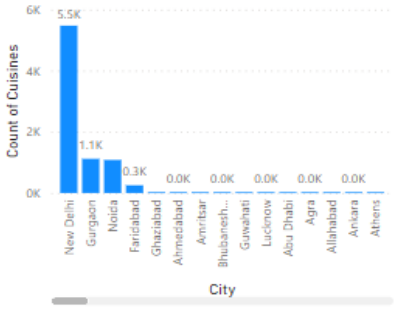
TAMIL NADU SKILL DEVELOPMENT CORPORATION
SKILLS FOR PROGRESS AND PROSPERITY

Sum of Price range by Rating text

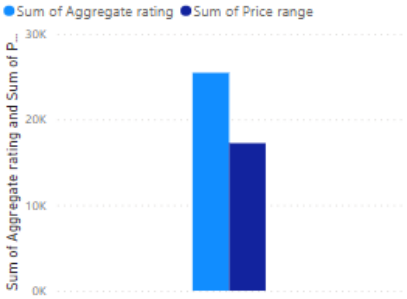


Has Online delivery	Sum of Price range	Restaurant ID
Yes	3	53
Yes	3	55
No	2	60
Yes	4	64
Yes	3	65
Yes	4	66
No	3	67
Yes	3	69
Yes	3	73
Yes	2	89
No	3	93
Yes	3	103
No	4	104
Total	17238	

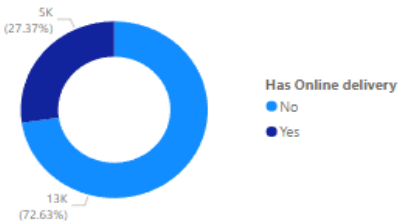
Count of Cuisines by City



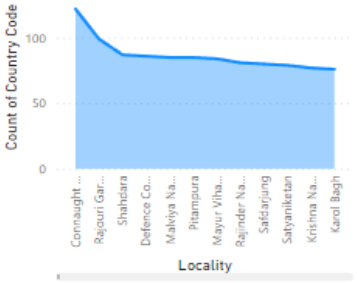
Sum of Aggregate rating and Sum of Price range



Sum of Price range by Has Online delivery

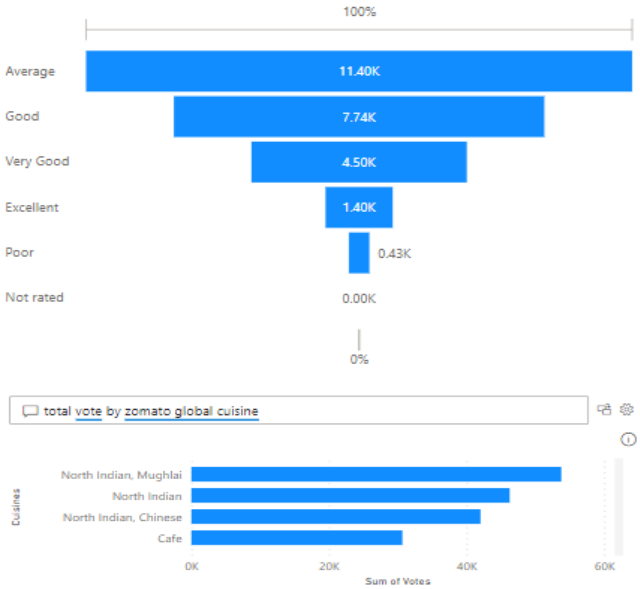


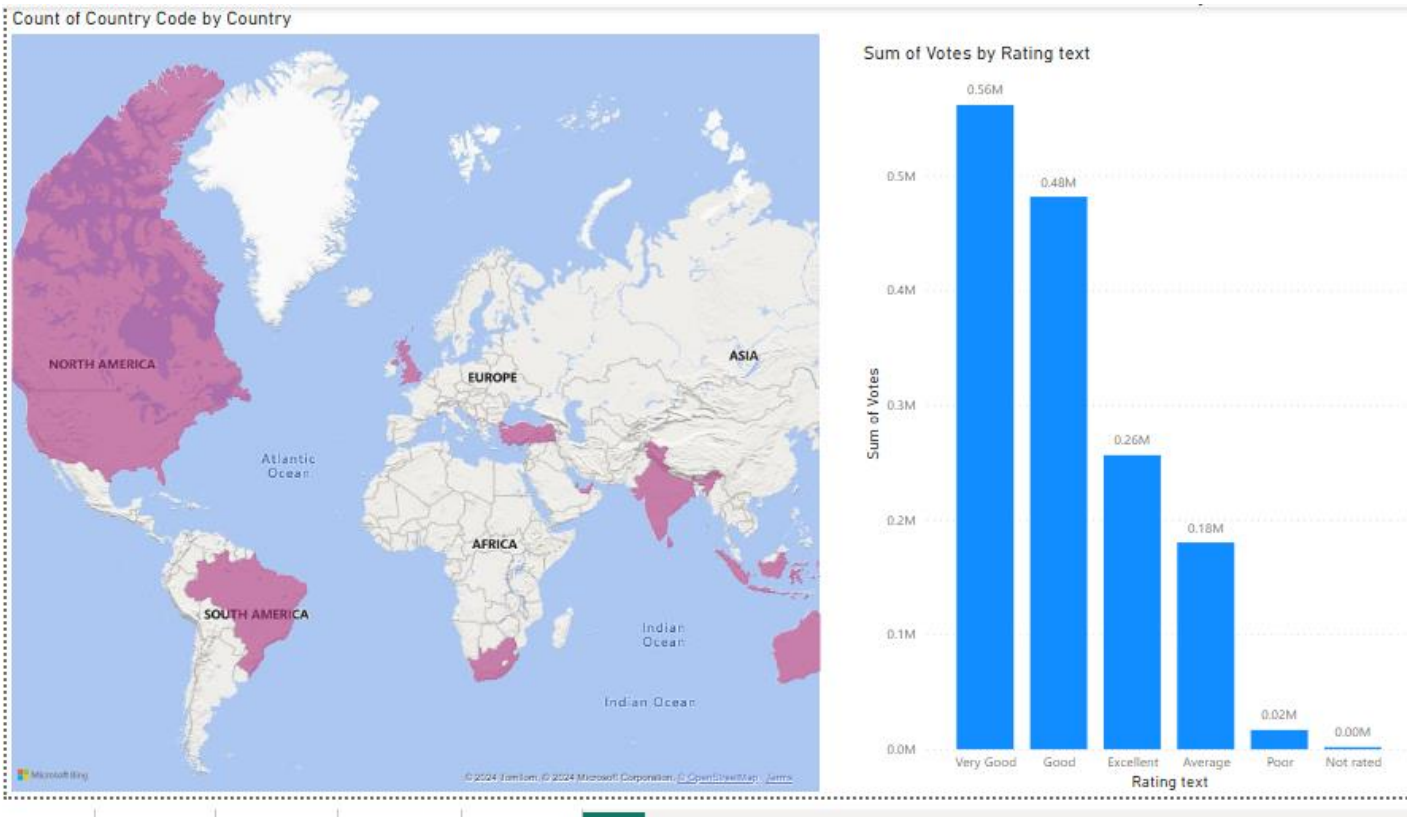
Count of Country Code by Locality

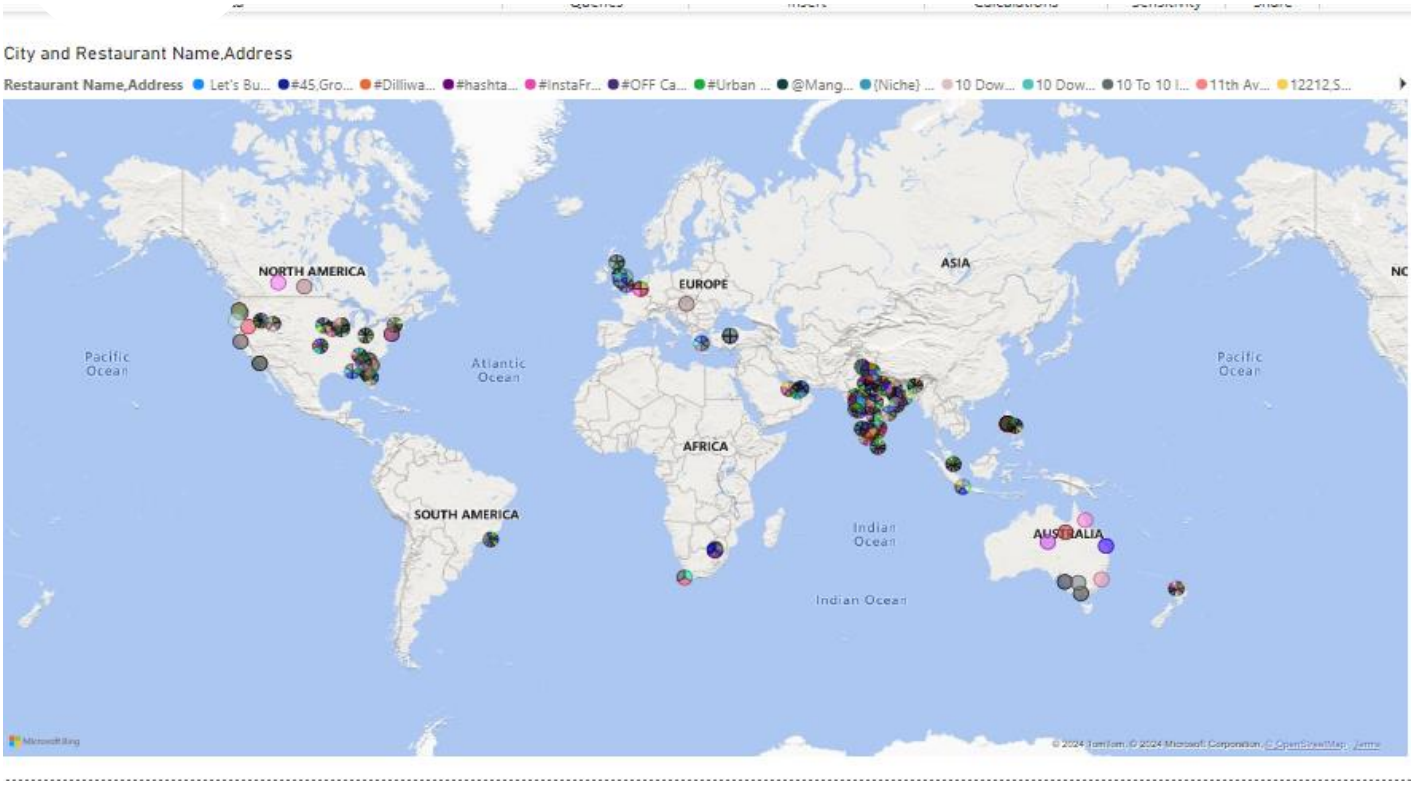


Count of Country Code by Country

Sum of Aggregate rating by Rating text




Count of Country Code by Country
NORTH AMERICA
EUROPE
ASIA
Atlantic Ocean
AFRICA
SOUTH AMERICA
Indian Ocean
Indian Ocean
Sum of Votes by Rating text
Sum of Votes
0.56M
0.48M
0.26M
0.18M
0.02M
0.00M
0.5M
0.4M
0.3M
0.2M
0.1M
0.0M
Very Good
Good
Excellent
Average
Poor
Not rated
Rating text


City and Restaurant Name,Address
Restaurant Name,Address
Let's Bu...
#45,Gro...
#Dilliwa...
#hashta...
#InstaFr...
#OFF Ca...
#Urban ...
@Mang...
(Niche) ...
10 Dow...
10 Dow...
10 To 10 I...
11th Av...
12212,S...
NORTH AMERICA
EUROPE
ASIA
Pacific Ocean
Atlantic Ocean
Pacific Ocean
AFRICA
SOUTH AMERICA
Indian Ocean
AUSTRALIA
Indian Ocean

CONCLUSION

An online food ordering system is developed where the customers can make an order for the food and avoid the hassles of waiting for the order to be taken by the waiter. Using the application, the end users register online, read the E-menu card and select the food from the e-menu card to order food online. Once the customer selects the required food item the chef will be able to see the results on the screen and start processing the food. This application nullifies the need of a waiter or reduces the workload of the waiter. The advantage is that in a crowded restaurant there will be chances that the waiters are overloaded with orders and they are unable to meet the requirements of the customer in a satisfactory manner. Therefore by using this application, the users can directly place the order for food to the chef online. In conclusion an online food ordering system is proposed which is useful in small family run restaurants.

FUTURE SCOPE

Consumer behavior in online food ordering has shifted dramatically in recent years. There's a growing preference for convenience and variety, with consumers increasingly reliant on mobile apps and websites to order meals. The trend is fueled by a desire for speed and ease, seeking options that offer quick delivery or pickup. Moreover, there's a heightened emphasis on customization and personalization, with users expecting tailored recommendations and flexible ordering features to suit individual preferences. Trust in digital platforms for food safety and quality has also

risen, leading to a surge in orders from a diverse range of restaurants. This shift reflects a fundamental change in how consumers perceive and interact with food services, placing a premium on seamless experiences and diverse choices within the online ordering sphere. The landscape of restaurant delivery has undergone a profound evolution, witnessing transformative shifts in business models and the integration of delivery services with dining experiences. Initially, restaurant delivery was predominantly an extension of traditional dine-in services, often relying on phone orders and in-house delivery personnel. However, the advent of digital technology revolutionized this paradigm, leading to the emergence of dedicated delivery services and the integration of online ordering platforms. Restaurants began embracing diverse business models, incorporating cloud kitchens, virtual brands, and ghost kitchens to cater specifically to the delivery market. This shift expanded their reach beyond physical dining spaces, optimizing operations for efficient delivery services. Moreover, the pandemic accelerated the integration of delivery services with the dine-in experience, prompting restaurants to enhance their infrastructure to accommodate both in-house dining and seamless delivery operations. Concepts like "dark stores" and dedicated delivery areas within restaurants emerged, facilitating the seamless handling of orders specifically tailored for delivery. This shift has significantly

altered the traditional restaurant model, emphasizing the need for a comprehensive and integrated approach to cater to evolving consumer preferences for both dining in and ordering out.

REFERENCES

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