Tech Saksham

Case Study Report

Data Analytics with Power BI

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

“ Ambai arts college”

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ABSTRACT

“”””””””Food Delivery Mobile Application Market”” report aims to provide a comprehensive presentation of the global market Food Delivery Mobile Application , with Data proliferation to assist readers in formulating business growth strategies , evaluating market competitiveness of **ICT Industry** with industry dynamics , analyse their position in the current market place , demand for data- driven insights , and make informed business decisions pertaining Food Delivery Mobile Application.
I Companies around the world are deploying various performance management tools and techniques to monitor and promote effective performance in the workplace. 360-degree feedback software is one of the most significant elements of performance management as it aids the management in gaining relevant insights regarding the potential performance of its workforce.

Apart from this, it also provides a real-time understanding of every individual's opportunities in the areas of learning and development. This platform enables businesses to receive and deliver non-anonymous and anonymous feedback across all levels of the departments in businesses and external customers .The growth of the market is due to the increasing demand for assessing employee performance and behavioral patterns. This software helps the user identify employee work ethics and evaluate the situation. The software is easily scalable and can be applied flexibly to any field, making it attractive to all employees.

The COVID-19 outbreak disrupted daily life and caused people and organizations to reconsider their activities and objectives. These improvements drove technological progress and innovation. Companies invested time and money in developing a complete, integrated platform of 360 degree feedback software and promoting, selling, and supporting this platform. Although their revenues have consistently increased every year, the revenue growth rate remained stable in 2020 due to increased competition. Thus, the COVID-19 pandemic laid the groundwork for future market growth.

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CHAPTER 1

INTRODUCTION

1.1 Problem Statement

There are some major challenges faced in food delivery business such as volatile princing model, difficult to engage and retain customers, inability to handle order fulfillment and logistics operations, identifying and partnering with the right experts in the online Food Delivery Market, meeting customer's expectations over food quality , finding the appropriate advertising methods . Due to the pandemic, a lot of people have been ordering food daily from a food delivery app. However, it has been noticed that most people don't order them every day. To make sure that these customers order every day, they are planning to launch a food delivery subscription. Create an experience in a food delivery app to help users discover the feature, configure their subscription based on their needs, and buy at the same.

Understanding my problem statement: My problem statement is about a food delivery app and I can understand that some users are willing to order in the same restaurant frequently and some of the users have to use it daily so by introducing a subscription plan the user will get new offers on restaurants they can go with the subscription plan and directly order the food they need and make use of the offers provided when subscribed

Research Problem Statement-
A food delivery app wants to make a subscription plan for its regular users who orders food daily. As a UX designer, my role is to understand the users perspective regarding their behavior while using the app on how they order food, what are their preferences, etc.

1.2 Proposed Solution

The proposed solution is to develop a Power BI dashboard that can analyse and visualize the online delivery restaurants and the customers ratings data. The dashboard will integrate data from various sources. It will provide a comprehensive view of restaurants business, preferences, and trends enabling online delivery restaurants entrepreneurs to make informed decisions. The dashboard will be interactive, user-friendly and customizable. The business analysis capability of the dashboard will enable online delivery restaurants to respond promptly to changes in customer behavior or preferences and tailor their products and services to meet customer needs. Proposed solution The food business has always been lucrative. “There’s no space for food,” said no one ever! Building a marketplace that serves the food and delights the customer with convenience and discounts is a dream come true. It is not only flooded with profits but also proves to improve retention and engagement.

A food delivery app is an instant way to build a relationship with your customer. It keeps you at the top of their mind. When they think of food, they automatically think of you.

The Pandemic has accelerated the need for on-demand food delivery app development as more people are still working remotely and wish to indulge in good and healthy food options. You can build the next Zomato or UberEATS with slight differences, filling in the gaps with the custom on-demand food delivery app development solutions.

1.3 Feature

- Business Analysis: The dashboard will provide business analysis of restaurants data.
- Restaurant Segmentation: It will segment restaurant based on various parameters like country code, address, longitude, latitude, etc.
- Trend Analysis: The dashboard will identify and display trends in restaurants business
- Predictive Analysis: It will use current data to predict future restaurants business .

1.4 Advantages

- **Data-Driven Decisions:** Restaurents entrepreneurs can make informed decisions based on the current data analysis.
- **Improved Restaurants Engagement:** Understanding restaurants business and trends can help restaurants entrepreneur with their restaurants more effectively.
- **Increased Revenue:** By identifying opportunities for delivery and services , restaurants entrepreneurs can increase their revenue .

1.5 Scope

This report provides a comprehensive exploration of the sector, categorizing the market by type, application, and geographic distribution. This document offers a comprehensive view of the Global Online Food Delivery Services Market, equipping stakeholders with the necessary tools to identify the areas for industry expansion. This guide empowers stakeholders to leverage market opportunities and make informed decisions. Market Analysis: Understanding the current market trends, customer preferences, and competitor landscape in the food delivery industry.User Experience (UX) Analysis: Evaluating the app's interface, ease of use, navigation, and overall user satisfaction.Technical Analysis: Reviewing the app's performance, reliability, scalability, and security features.Business Model Evaluation: Examining the revenue model, pricing strategies, partnerships, and customer acquisition channels.Operational Efficiency: Assessing the efficiency of order processing, delivery logistics, and customer support systems.Data Analysis: Analyzing user data, order patterns, feedback, and reviews to identify opportunities for improvement and innovation.Marketing and Branding Analysis: Reviewing the app's marketing strategies, brand positioning, and customer engagement initiatives.Regulatory Compliance: Ensuring adherence to local regulations and industry standards related to food safety, data privacy, and labor practices.By conducting a comprehensive analysis across these dimensions, you can gain insights into the app's strengths, weaknesses, opportunities, and threats, helping to devise strategies for sustainable growth and competitive advantage.

CHAPTER 2

SERVICES AND TOOLS REQUIRED

2.1 Services Used

- **Data Collection and Storage Services:** Restaurants entrepreneurs need to collect and store restaurants data in real -time. This could be achieved through services like Azure Data Factory, Azure Event Hubs, or AWS Kinesis for real -time data collection, and Azure SQL Database or AWS RDS for data storage.
- **Data Processing Services:** Services like Azure Stream Analytics or AWS Kinesis Data Analytics can be used to process the real-time data.
- **Machine Learning Services:** Azure Machine Learning or AWS SageMaker can be used to build predictive models based on historical data.

2.2 Tools and Software used

Tools:

- **Power BI:** The main tool for this project is Power BI, 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 .

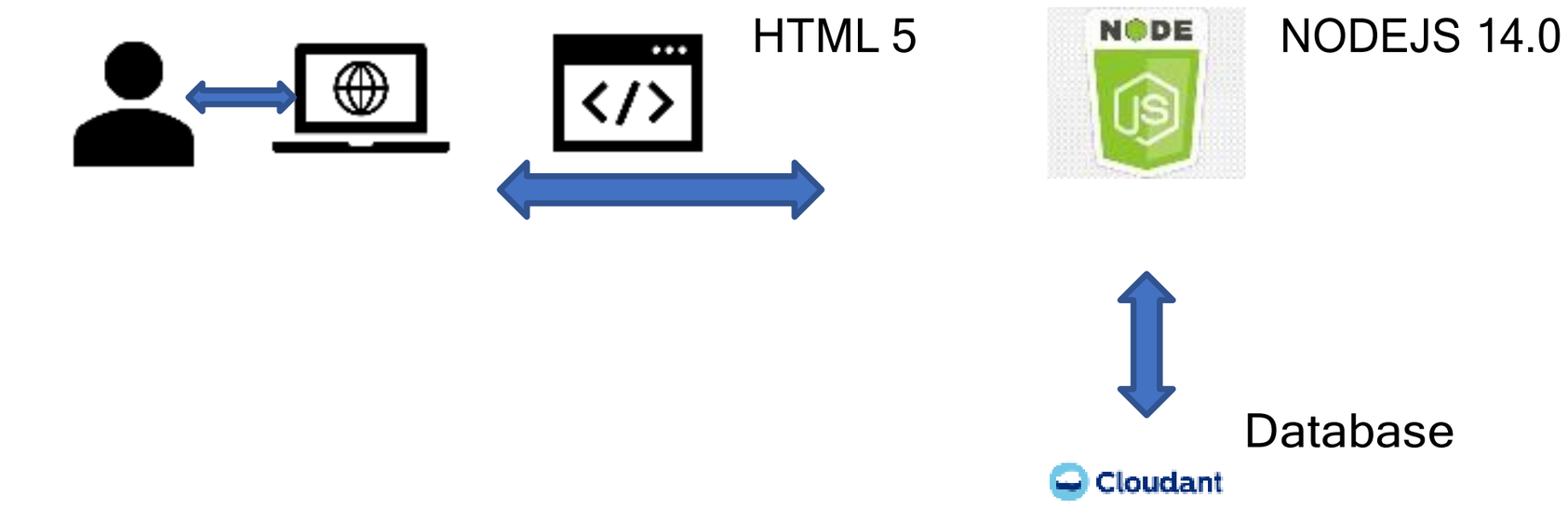
Software Requirements:

- **Power BI Desktop:** This is a Windows application that you can use to create reports and publish them to Power BI.
- **Power BI Service:** This is an online SaaS (Software as a Service) service that you use to publish reports, create new dashboards, and share insights.
- **Power BI 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



Here’ s a high-level architecture for the project:

1. **Data Collection:** Real-time restaurants data is collected from various sources. This could be achieved using services like Azure Event Hubs or AWS Kinesis.
2. **Data Storage:** The collected data is stored in a database for processing. Azure SQL Database or AWS RDS can be used for this purpose.
3. **Data Processing:** The stored data is processed in real-time using services like Azure Stream Analytics or AWS Kinesis Data Analytics.
4. **Machine Learning:** Predictive models are built based on processed data using Azure Machine Learning or AWS SageMaker . These models can help in predicting restaurant business, ratings, etc.
5. **Data Visualization:** The processed data and the results from the predictive models are visualized in real-time using Power BI. PowerBI

Allows you to create interactive dashboards that can provide valuable insights into the data.

6. **Data Access:** The dashboards created in Power BI can be accessed through Power BI Desktop, Power BI Service (online), and Power BI Mobile.

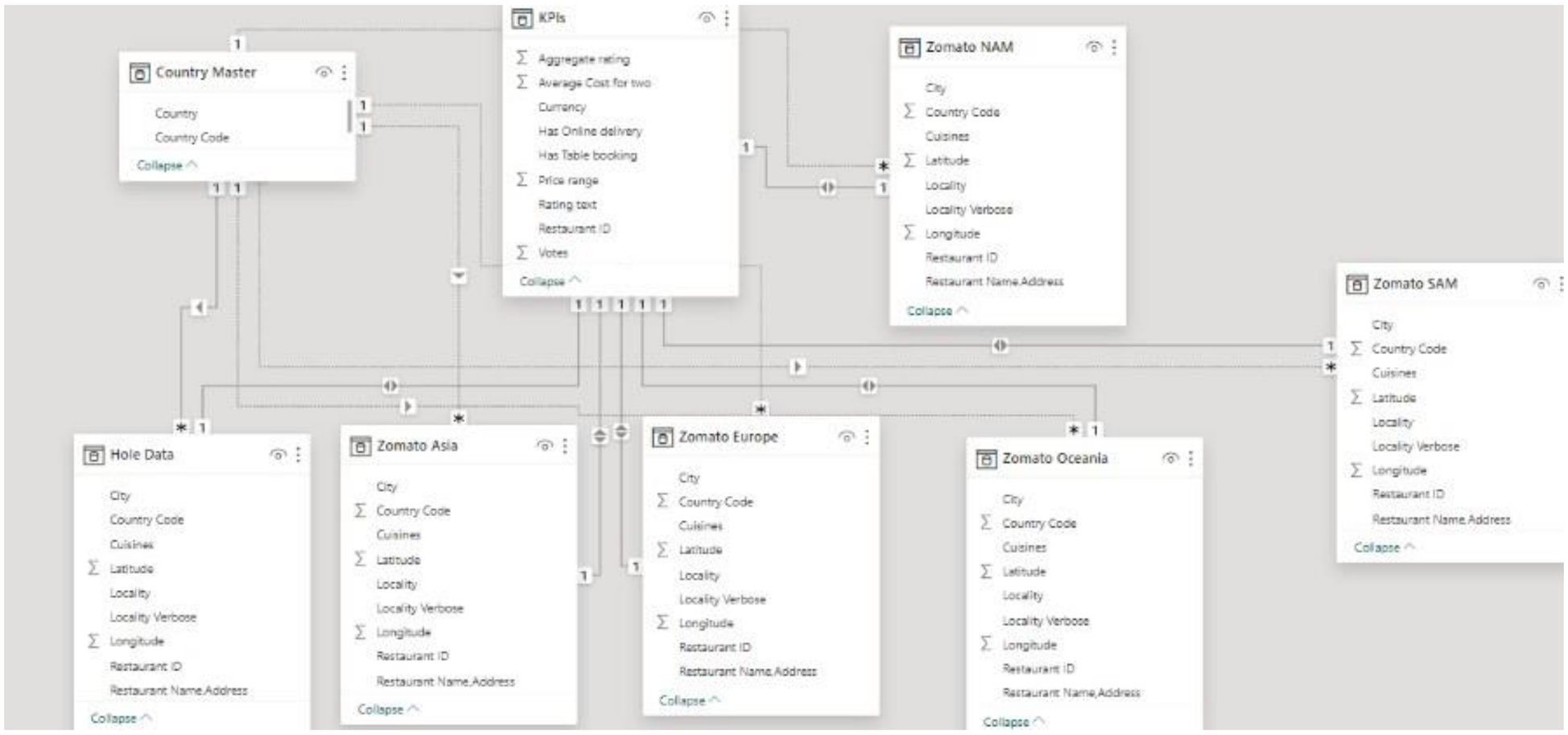
This architecture provides a comprehensive solution for business analysis of online food delivery apps.

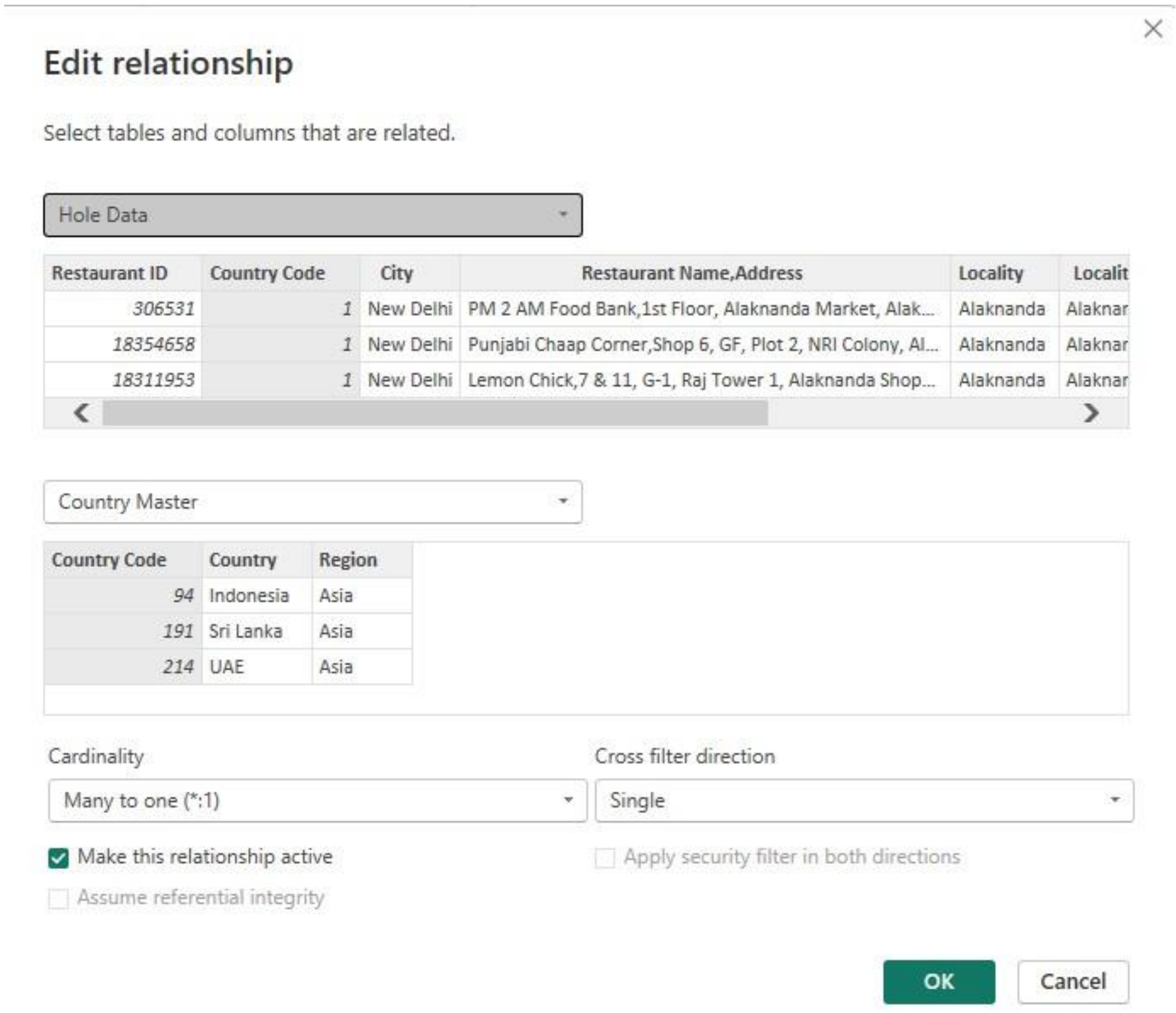
CHAPTER 4

MODELING AND RESULT

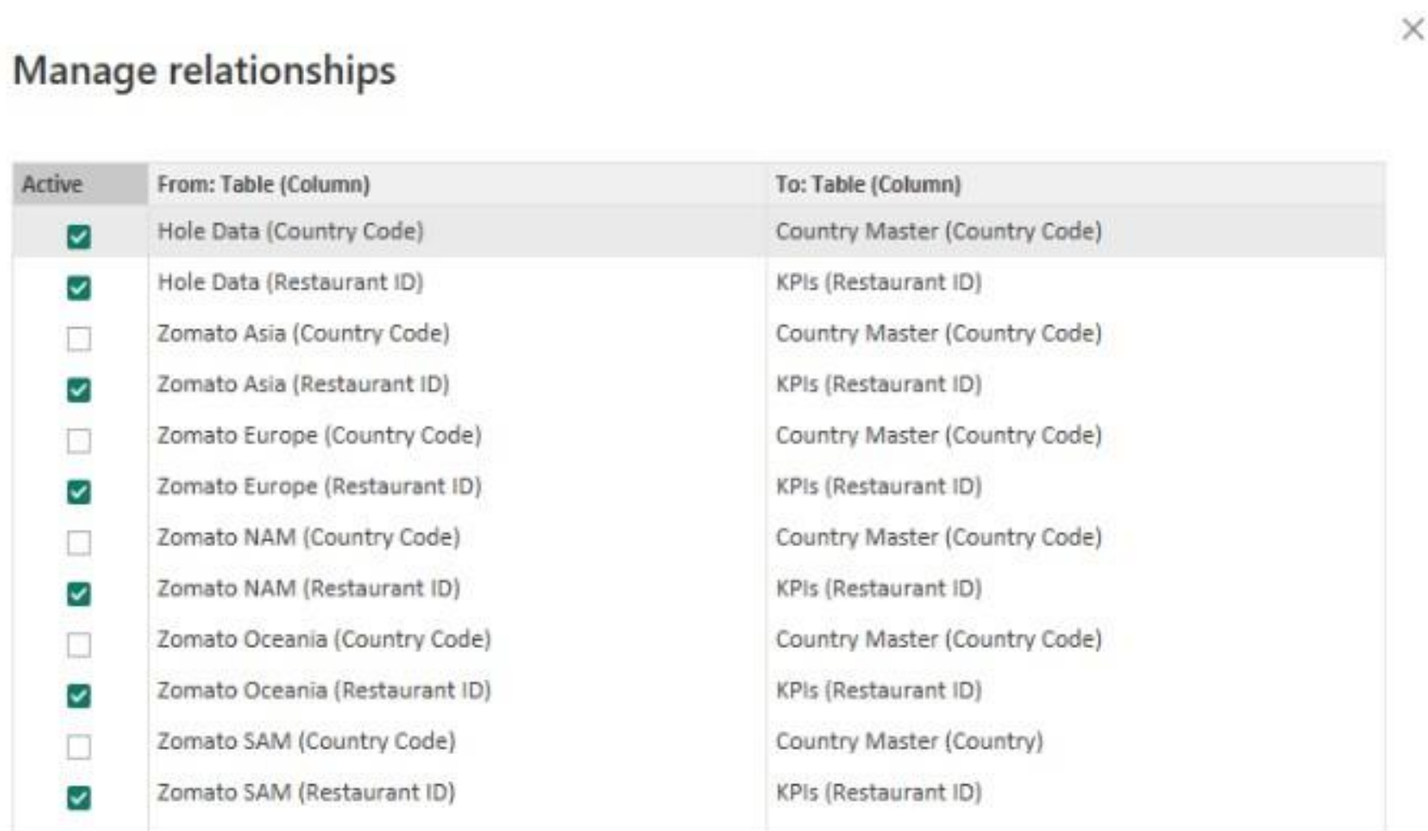
Manage relationship

The “ file will be used as the main connector as it contains most identifier (Country , Country code) which can be use to relates the 6 data together. The “ file is use to link the client profile geographically district ”





In Power BI, editing relationships allows users to adjust how tables are linked together, which is crucial for accurate data analysis. This feature enables usersto establish or modify connections between tables based on common fields, ensuring data integrity and enabling seamless querying across multiple tables.By editing relationships, users can define relationships as one-to-one, one-to-many, or many-to-many, depending on the nature of the data. This flexibility empowers users to refine their data models, resolve data inconsistencies, and optimize performance. Overall, editing relationships in Power BI is a fundamental aspect of data modeling, enabling users to create robust and efficient data structures that support their analytical needs.



Condition Column:

This query is used to connect the another coloums.use this query to split the regionfrom the exiting data.then the data visualization is much better. In Power BI, conditions are utilized extensively to manipulate, filter, and format data. These

conditions can be applied in various aspects of Power BI development, such as filtering data displayed in visuals, creating calculated columns based on specific criteria, applying conditional formatting to visuals, defining measures with dynamic logic, transforming data in the Power Query Editor, implementing hierarchical filtering, and parameterizing queries for interactive filtering. Essentially, conditions in Power BI empower users to tailor their data analysis, visualization, andtransformation processes to suit their specific needs, enabling them to derive valuable insights and make informed decisions effectively.

Country Code	Country	Region
94	Indonesia	Asia
191	Sri Lanka	Asia
214	UAE	Asia
1	India	Asia
30	Brazil	SAM
14	Australia	Oceania
208	Turkey	Asia
189	South Africa	Africa
216	United States	NAM
215	United Kingdom	Europe
162	Phillipines	Asia
166	Qatar	Asia
37	Canada	NAM
148	New Zealand	Oceania
184	Singapore	Asia

In this data the new column added named Region to identify the country with thehelp of country code.every contry code have a uniqu region so easy to access the slicer.

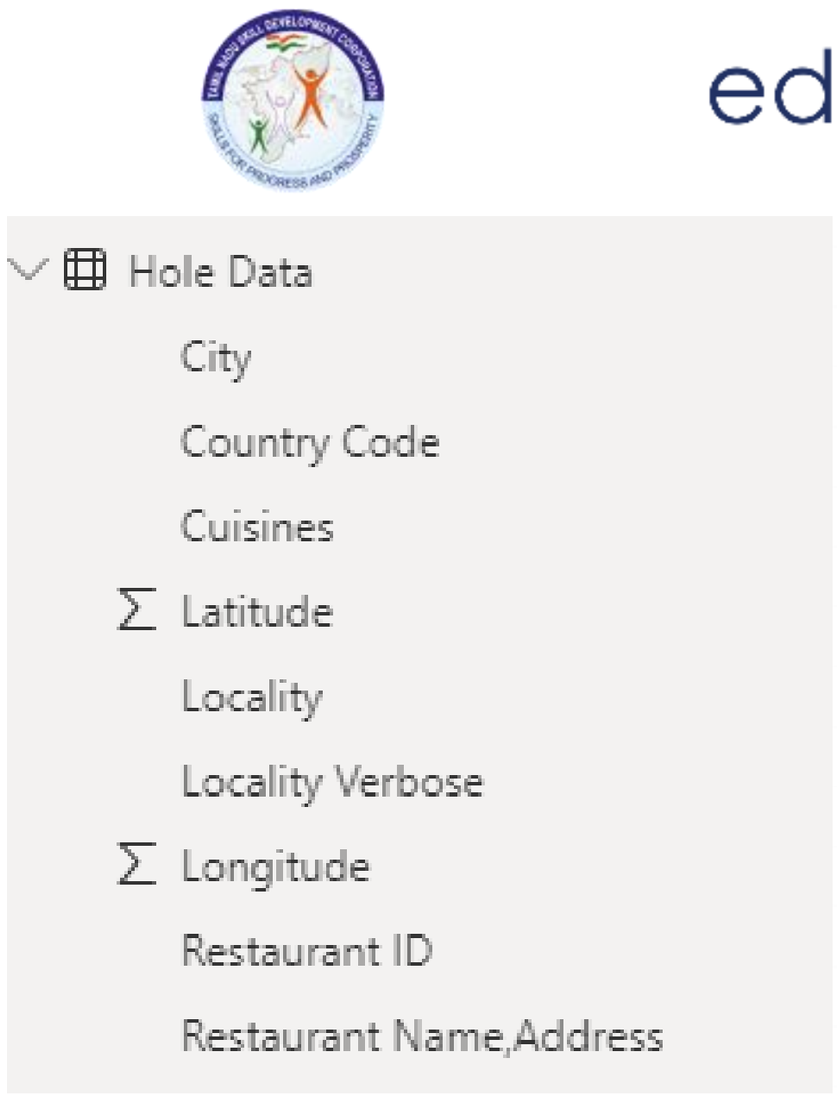
Changing the order of Region name at Power Query

Duplicat th “ /region the spli colum usin spac a delimiter.Then merge column by Region and direction. Refer to applied steps for

	Country Code	Country
1	94	Indonesia
2	191	Sri Lanka
3	214	UAE
4	1	India
5	30	Brazil
6	14	Australia
7	208	Turkey
8	189	South Africa
9	216	United States
10	215	United Kingdom
11	162	Phillipines
12	166	Qatar
13	37	Canada
14	148	New Zealand
15	184	Singapore

Edit the columns:

In “ country master” dataset there are so many duplicate columns. Use the condition columns to remove the duplicate columns and null values



Combine data set using power query:

Create a new dataset named " Whole data" and combine all the existing datasetinto

One single dataset.it is used to access the visual more effectively .The main dataset Named as Wholedata .it consist 6 type of dataset named as " Zomato Africa" , " Zomato asia" ," Zomato europe" ," Zomato oceania" ," zomato NAM" ," Zomato sa"

Dashboard:

CONCLUSION

The project " Real-Time Analysis of Zomato Customers" using PowerBI has successfully demonstrated the potential of data analytics in the Food sector. Market Potential: The food delivery industry is experiencing significant growth, driven by changing consumer preferences and lifestyle shifts towards convenience. There is a vast market potential for the app to tap into, with increasing demand for food delivery services.User Experience: While the app offers convenience, there are areas for improvement in the user experience, including interface design, navigation simplicity, and personalization features. Enhancing the overall user experience will be crucial for retaining and attracting customers.Technical Infrastructure: The app demonstrates robust technical infrastructure, ensuring reliable performance and scalability. However, continuous monitoring and optimization are necessary to maintain high standards of security, speed, and stability, especially during peak usage times.Business Model Viability: The app's business model appears sustainable, leveraging multiple revenue streams such as delivery fees, commission from restaurants, and advertising. Exploring new partnerships and revenue opportunities could further strengthen the business model.Operational Efficiency: While the app effectively facilitates order processing and delivery logistics, there are opportunities to enhance operational efficiency through streamlined processes, optimized routes, and improved coordination between stakeholders.Data-Driven Insights: Leveraging data analytics can provide valuable insights into user behavior, preferences, and market trends. Utilizing this data to personalize offerings, optimize pricing, and tailor marketing strategies can drive growth and customer satisfaction.Marketing and Branding: Effective marketing and branding strategies are essential for standing out in a competitive market. Investing in targeted marketing campaigns, building a strong brand identity, and fostering customer engagement through loyalty programs can help drive customer acquisition and retention.Regulatory Compliance: Ensuring compliance with regulatory standards and industry guidelines is paramount for maintaining trust and credibility among customers and stakeholders. Regular audits and updates to policies and procedures are necessary to mitigate risks and ensure compliance.In conclusion, by addressing the identified areas for improvement and leveraging its strengths, the food delivery app has significant potential for success in the dynamic and competitive food delivery industry. Continuously adapting to changing market dynamics, embracing innovation, and prioritizing customer satisfaction will be key to sustaining growth and staying ahead of the competition.

FUTURE SCOPE

Integration of Emerging Technologies: Exploring the integration of emerging technologies such as artificial intelligence (AI), machine learning (ML), blockchain, and augmented reality (AR) to enhance user experience, optimize operations, and personalize services. Sustainability Initiatives: Addressing sustainability concerns by implementing eco-friendly packaging solutions, reducing carbon footprint in delivery operations, and partnering with environmentally conscious suppliers and restaurants. Health and Wellness Focus: Catering to the growing demand for healthier food options by collaborating with health-conscious restaurants, providing nutritional information, and offering personalized dietary recommendations based on user preferences and health goals. Expansion into New Markets: Expanding into new geographical markets, both domestically and internationally, to tap into underserved regions and capitalize on growing demand for food delivery services. Diversification of Services: Diversifying services beyond food delivery to include grocery delivery, meal kit delivery, catering services, and virtual kitchen concepts to cater to a broader range of consumer needs and preferences. Enhanced Data Analytics: Leveraging advanced data analytics tools and predictive analytics to anticipate customer preferences, optimize inventory management, forecast demand, and improve operational efficiency. Partnerships and Collaborations: Forming strategic partnerships and collaborations with complementary businesses such as ride-sharing companies, grocery stores, restaurants, and food suppliers to create synergies and offer bundled services to customers. Focus on Customer Loyalty and Retention: Implementing customer loyalty programs, referral incentives, and personalized rewards to foster customer loyalty, increase retention rates, and drive repeat business. Regulatory Compliance and Ethical Practices: Proactively addressing regulatory challenges, ensuring compliance with evolving food safety standards, data privacy regulations, and labor laws, while upholding ethical business practices and corporate social responsibility. By continuously reassessing and adapting the business strategy to align with emerging trends and consumer preferences, the food delivery app can position itself for sustained growth and competitiveness in the evolving marketplace.

REFERENCES

https://youtu.be/ZgzGqoq3Xuc?si=ClRHlJTMjVwfV3VT

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