“360-degree Business Analysis of Online Delivery Apps"

"Rani Anna Government College For Womens”

NM ID	NAME
CB7550D0E2819BB9DCE4AC6CC34A8010	S.Pravina

R.UMAMAHESWARI	Trainer Name
R.UMAMAHESWARI	Master Trainer

ABSTRACT

Data analytics Power BI plays a vital role in the Food ordering industry, revolutionizing the way food delivery business operate and improving the overall customer experience. Data analytics lets restaurants and food delivery platform understand customer preference and behaviour. By analysing past orders and user data buisness can tailor their menus, promotions and recommendations ensuring that customers get personalised suggestions that cater to their tastes. It not only boots customer satisfaction but also increases sales and customer loyalty..

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CHAPTER 1

INTRODUCTION

- **Problem Statement**

I came across this idea while researching dining experiences across various eating segments and how people react to them in different settings. From there, a study was conducted about different users who order food online, and a cohesive product was designed which helped address different needs of users making online delivery more enhanced.

- ## Proposed Solution

1. Keeping the food quality high, 2.Tracking the destination, 3.Wapping quick delivery at a time, 4.Resolving customer complaint and query, 4.Concern and care damage.

- ## Feature

- **Online food delivery apps make lives easier for users. With just a few clicks, they can order meals and get the food delivered straight to their front door.**
- **Recommended food section**: Highlight popular dishes based on user preferences to assist customers who are looking for tired-and-tested options.
- **Easy add to card functionality:** Implement visible and easily accessible buttons next to each menu item, so userscan add items with a single tap.
- **Search and filter option:** Functionality helps users locate specific dishes or cuisiness quickly. In addition, provide filters based on dietary preferences, price ranges, or food types to streamline the selection process.

- ## Advantages

- **More customers**: The companies prefer automated subscriptions to assist customers with repetitive orders. There is a significant growth witnessed in automatic subscription.
- **Online tracking**: Online tracking. In online shopping, consumers are facilitatedwith online tracking as they can easily track the order and delivery status.
- **Increase visibility**: An onlinemeal ordering system can condiderably increase a restaurants internet visibility, enhancing its online presence and luring more potential consumers.

- ## Scope

If you are an entrepreneur focusing on this particular domain, then opputunities are huge. All the oppurtunities come with great benefits, including the affordability to manage your business, security, scalability, easy tracking facility, and flexibility. Now that we have seen the industries that will drive the on-demand delivery apps industry in the future, we can realize that consumer trends are changing.

CHAPTER 2

SERVICES AND TOOLS REQUIRED

2.1 Services Used

- **Delivery apps**: A delivery app is a web or mobile application that enables users to order and pay for goods and services.

- **Online Services**: Services like Azure Stream Analytics or Kinesis Data Analytics can be used to process the real-time data.

- Saral is an on-demand delivery service application that allows you to indulge in same day intra-city delivery services

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.

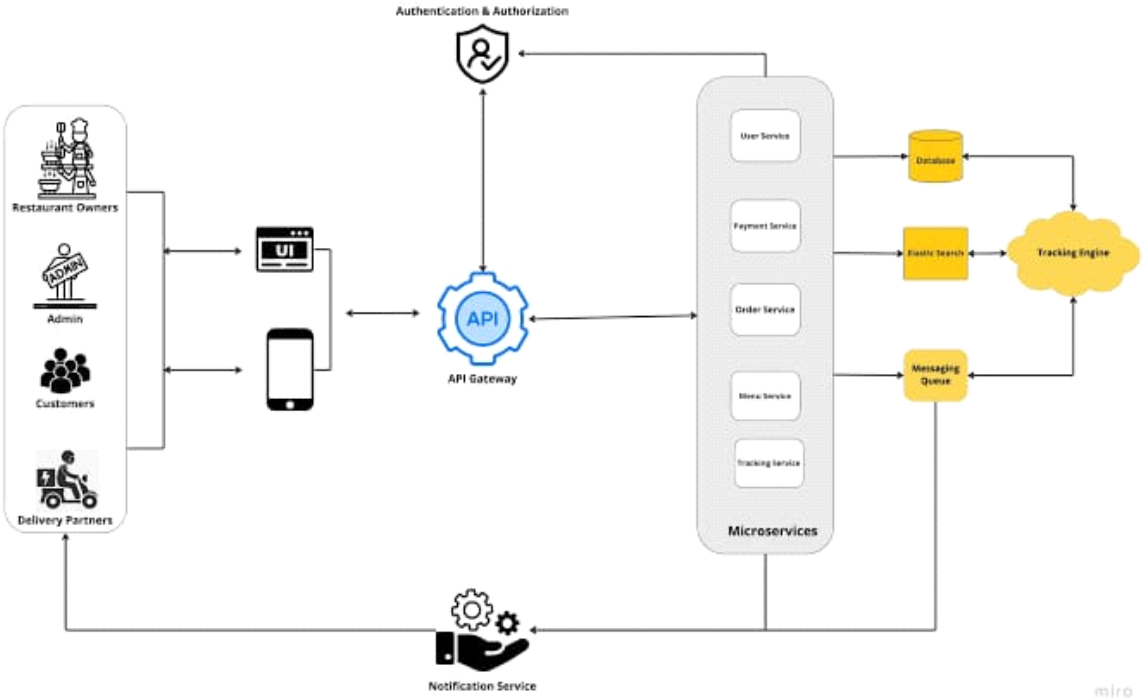
- **PowerBI Service**: This is an online SaaS (Software as a Service) service that you use to publish reports, create new dashboards, and share insights.

- **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



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

- **Architecture:** Proposed below is a high-level reference architecture for Online food delivery systems. This proposed architecture is generic and it can be deployed to any of cloud provider like AWS
- Integration with map provider is there and we get details about routes, traffic and commute time
- **Order placement**: The user can place an order of selected dishes and food. They just need to cross verify their preferred dish, delivery time, and proceed check-out
- **Payment gateway integration**: You provide the users with multiple payment options like credict cards.

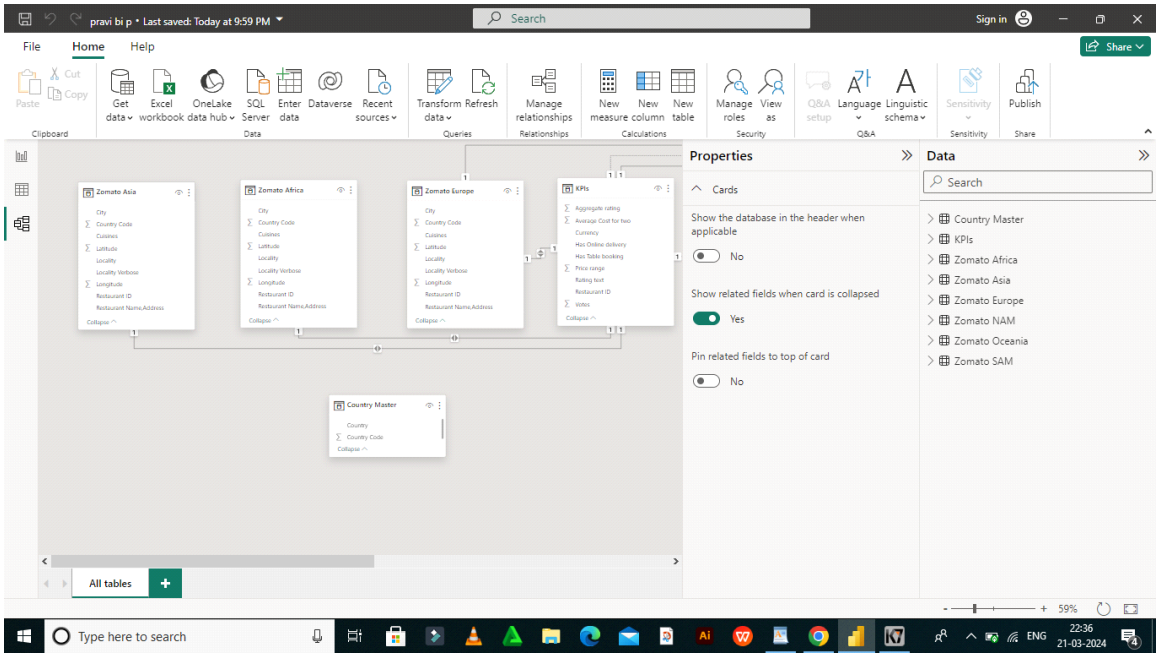
- **Data Visualization**: The processed data and the results from the predictive models are visualized in real-time using PowerBI. PowerBI allows you to create interactive dashboards that can provide valuable insights into the data.
- **Data Access**: The dashboards created in PowerBI can be accessed through PowerBI Desktop, PowerBI Service (online), and PowerBI Mobile.

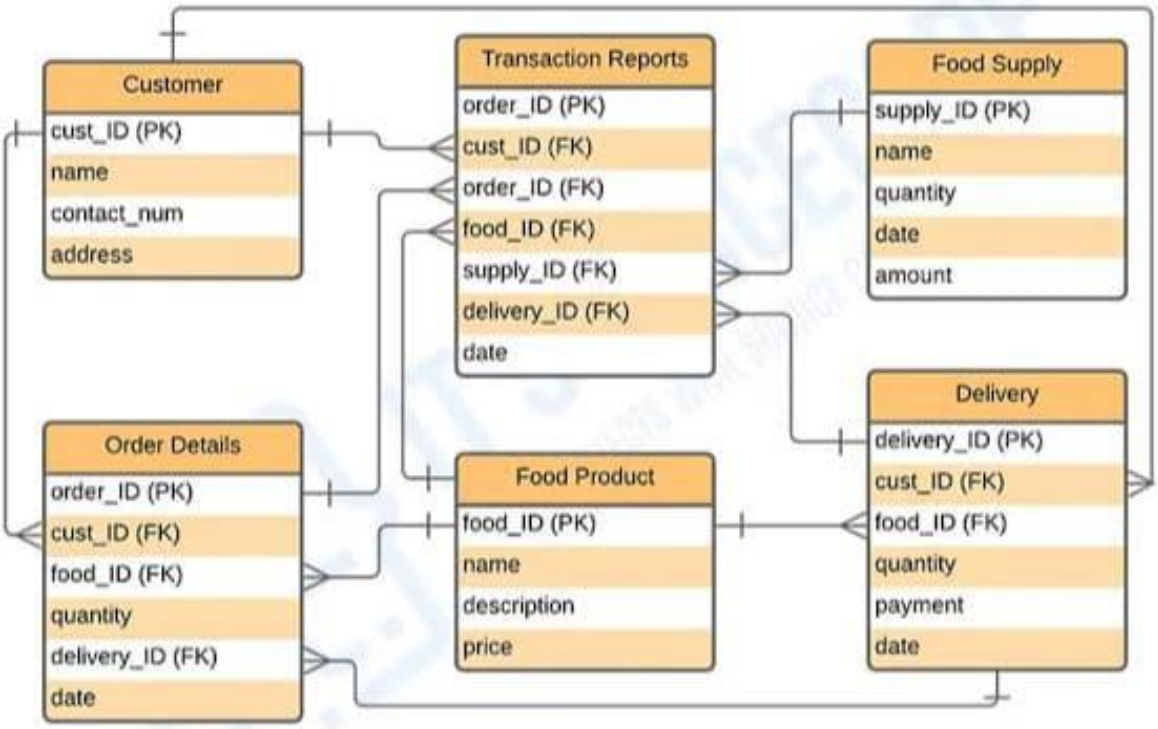
CHAPTER 4

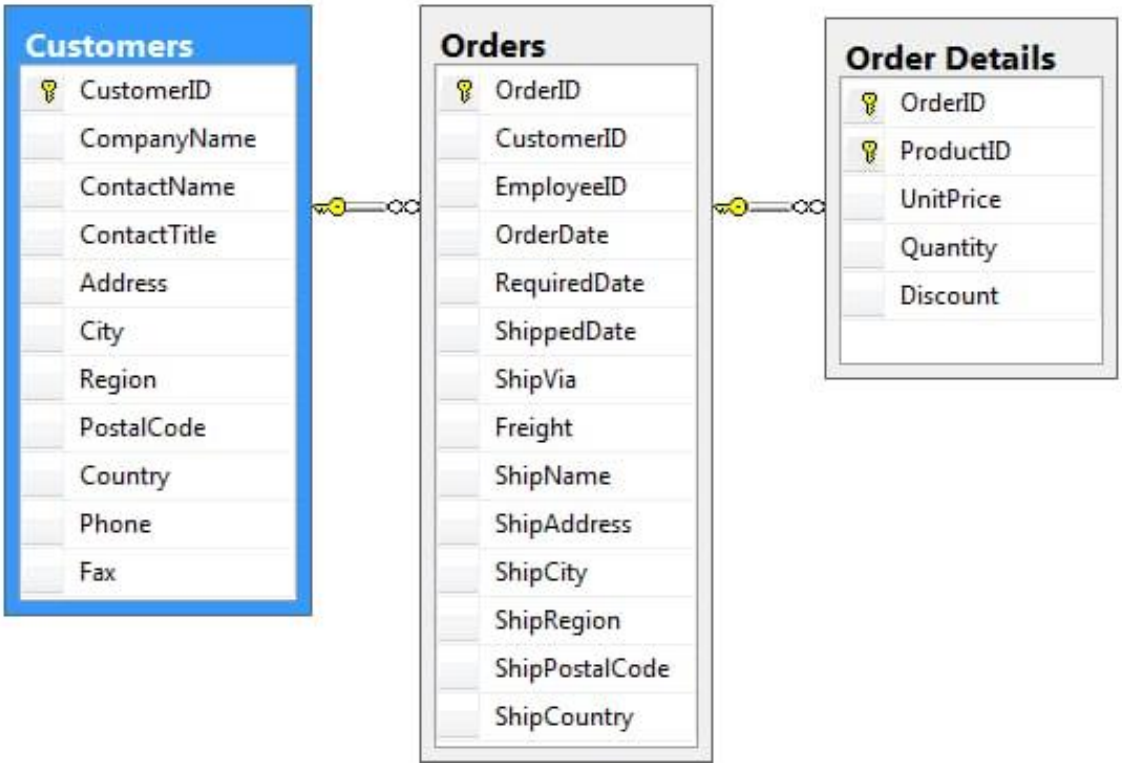
MODELING AND RESULT

Manage relationship

The “disp” file will be used as the main connector as it contains most key identifier (cust id, delivery id and description id) which can be use to relates the 8 data files together. The “order” file is use to link the client profile geographically with “order id”



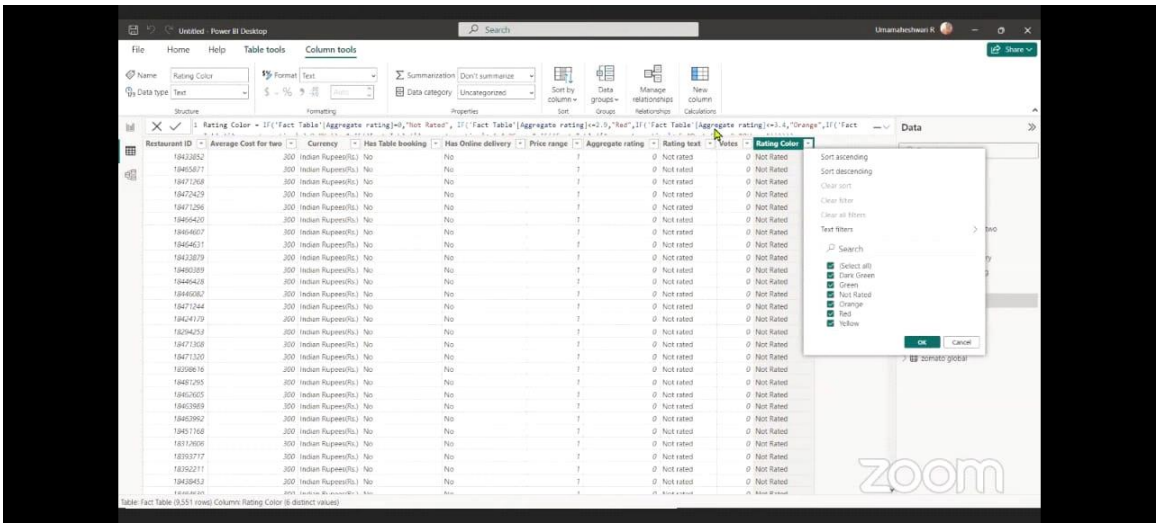

Customer
cust_ID (PK)
name
contact_num
address
Transaction Reports
order_ID (PK)
cust_ID (FK)
order_ID (FK)
food_ID (FK)
supply_ID (FK)
delivery_ID (FK)
date
Food Supply
supply_ID (PK)
name
quantity
date
amount
Delivery
delivery_ID (PK)
cust_ID (FK)
food_ID (FK)
quantity
payment
date
Order Details
order_ID (PK)
cust_ID (FK)
food_ID (FK)
quantity
delivery_ID (FK)
date
Food Product
food_ID (PK)
name
description
price


Customers
CustomerID
CompanyName
ContactName
ContactTitle
Address
City
Region
PostalCode
Country
Phone
Fax
Orders
OrderID
CustomerID
EmployeeID
OrderDate
RequiredDate
ShippedDate
ShipVia
Freight
ShipName
ShipAddress
ShipCity
ShipRegion
ShipPostalCode
ShipCountry
Order Details
OrderID
ProductID
UnitPrice
Quantity
Discount

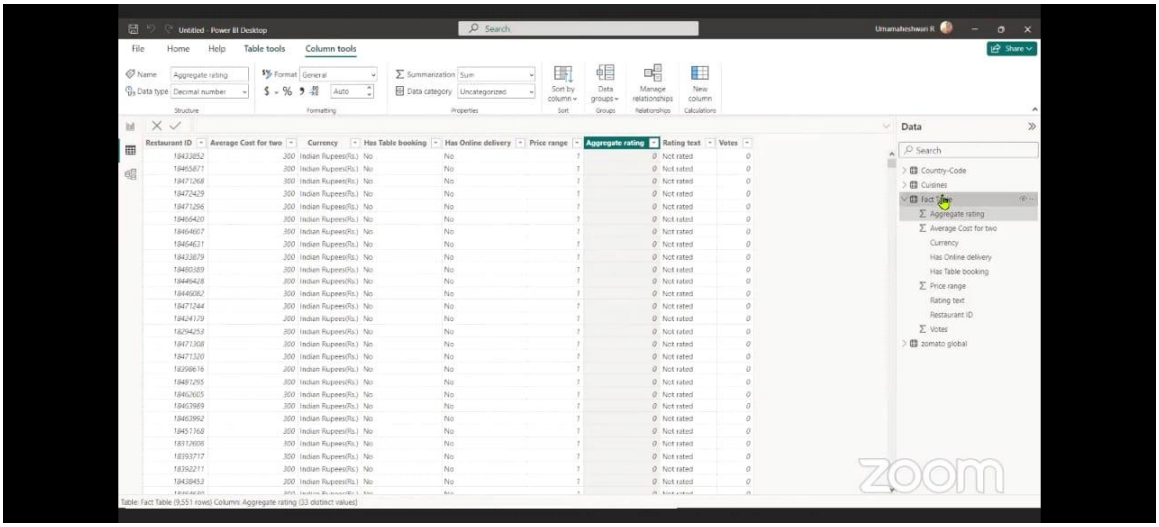
	count	unique	top	freq
ID	45593	45593	0x4607	1
Delivery_person_ID	45593	1320	PUNERES01DEL01	67
Delivery_person_Age	45593	23	35	2262
Delivery_person_Ratings	45593	29	4.8	7148
Order_Date	45593	44	15-03-2022	1192
Time_Orderd	45593	177	NaN	1731
Time_Order_picked	45593	193	21:30:00	496
Weatherconditions	45593	7	conditions Fog	7654
Road_traffic_density	45593	5	Low	15477
Type_of_order	45593	4	Snack	11533
Type_of_vehicle	45593	4	motorcycle	26435
multiple_deliveries	45593	5	1	28159
Festival	45593	3	No	44469
City	45593	4	Metropolitian	34093
Time_taken(min)	45593	45	(min) 26	2123

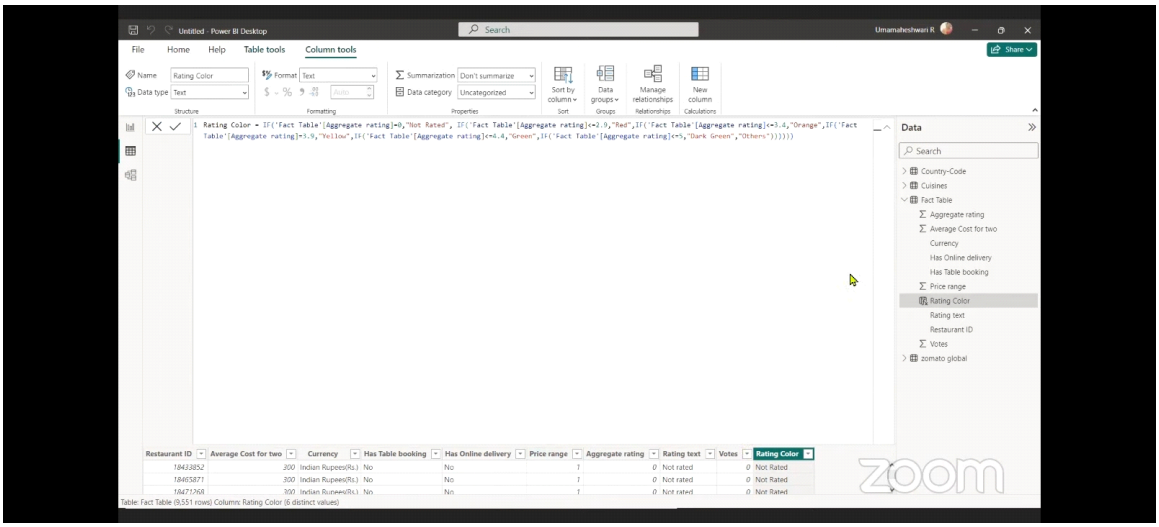
Modelling for online delivery

Notice that the Restaurant name and id of the client are missing from the data. These can be formulated from the birth number YYMMDD where at months (the 3rd and 4th digits) greater than 50 means that client is a range text We can create a column for online delivery apps



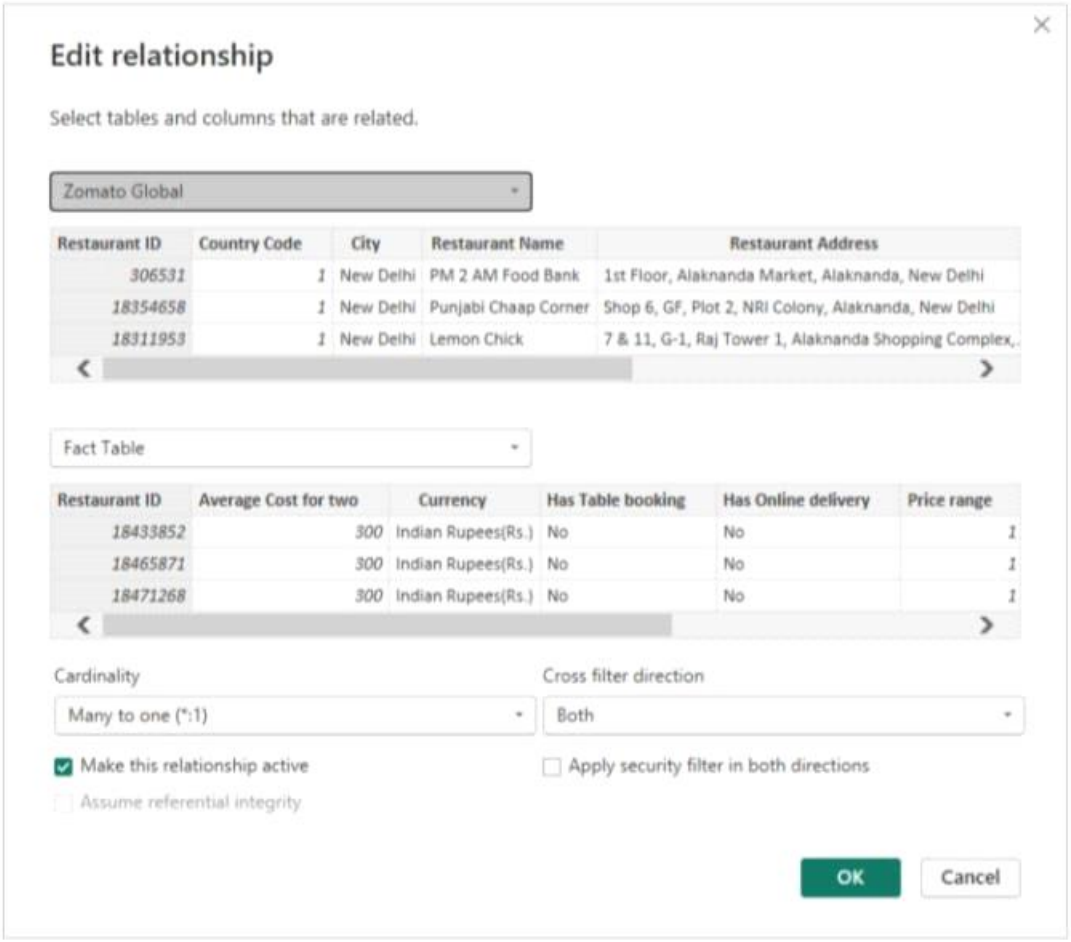
For birthday, we need to reduce the delivery id by 50 and then change the date format to DD/MM/YYYY adding 1900 to the year.





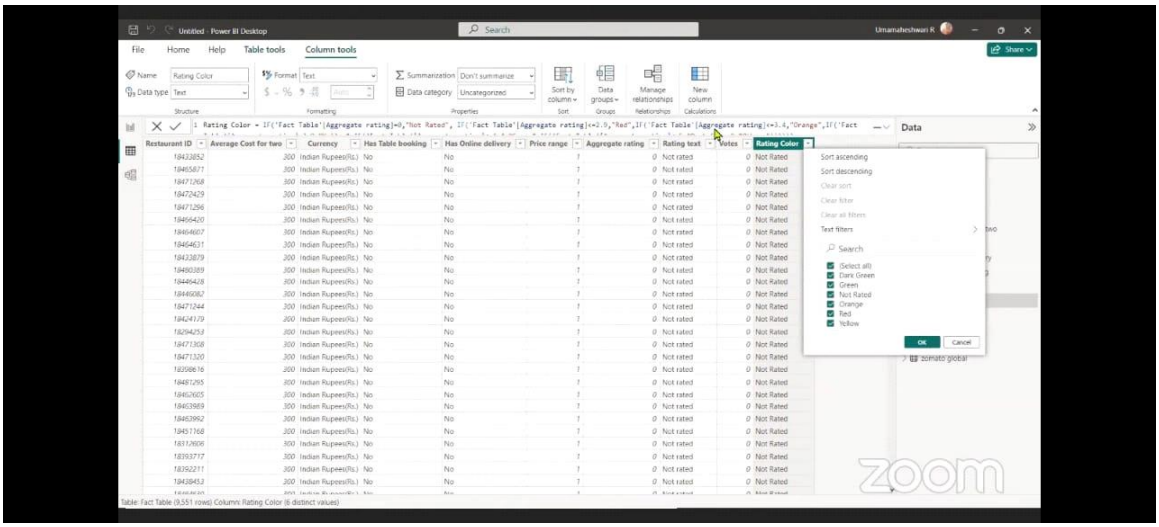
Replacing values

Set some fields to English for easy understanding, we replace values to English with the Power Query Editor.



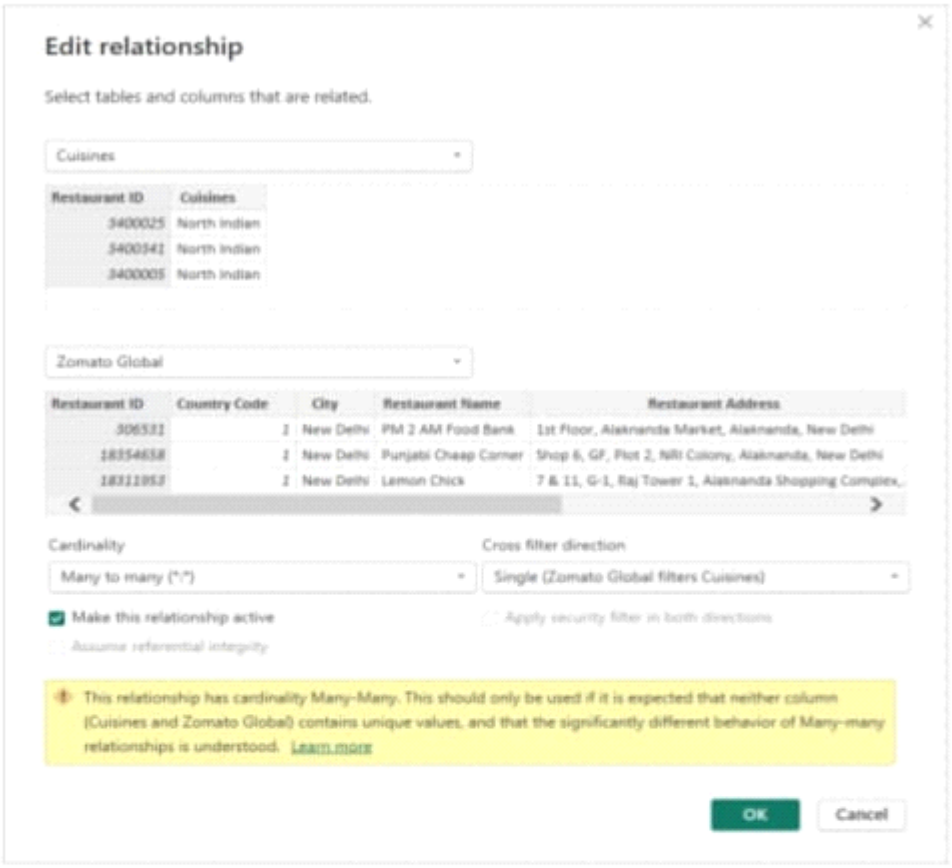
Modeling for Zomato Global and Fact Table

Relationship created between Zomato Global and Fact Table with "Many to One" operation.



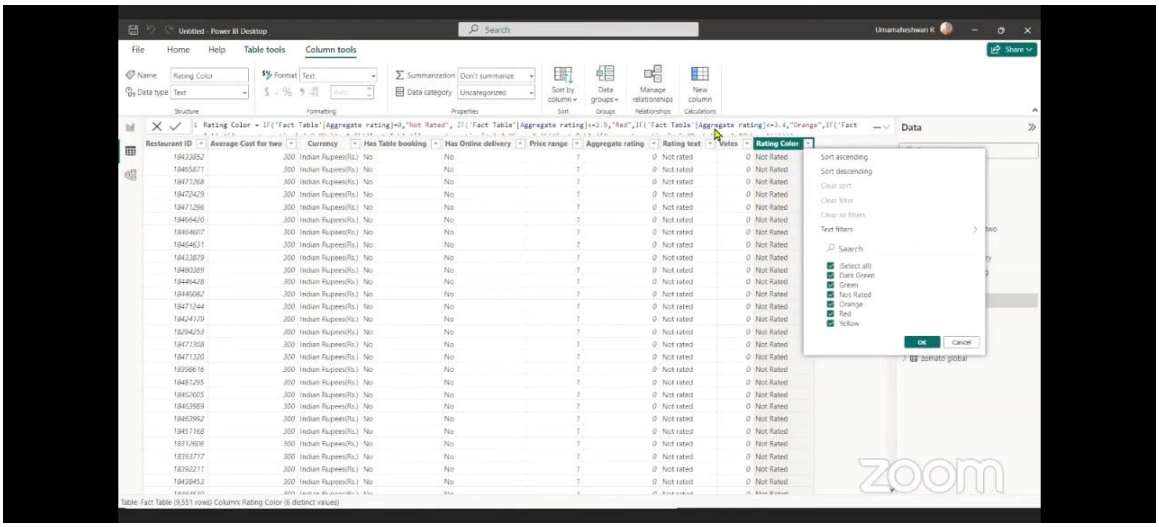
Changing the order of Region name at Power Query

Duplicate the “district /region” then split column using space as delimiter.



Relationship created between Cuisines and Zomato Global with "Many to many" operation.

Then merge column by Region and direction. Refer to applied steps for details.



Grouping of age by ranges

As the customers' age ranges from 12 to 88, we shall group them into different generation age range for easier profiling, we will group the ages into 5 groups.

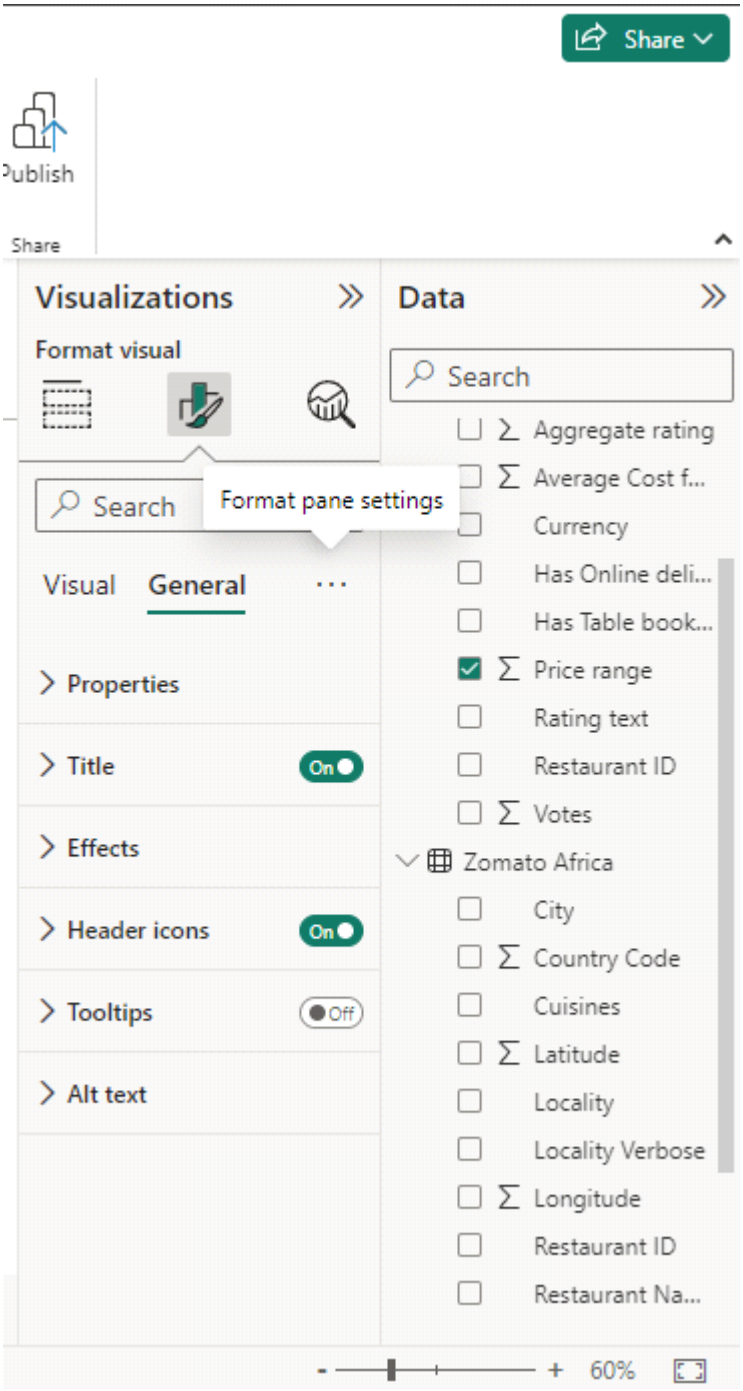
The Gen Y are youths,

Gen X are young working adults, some starting their families

Baby Boomer are working adults with families.

The silent Generations some are working and retired, living on pensions.

The greatest Generation, retired elderly living on pensions.



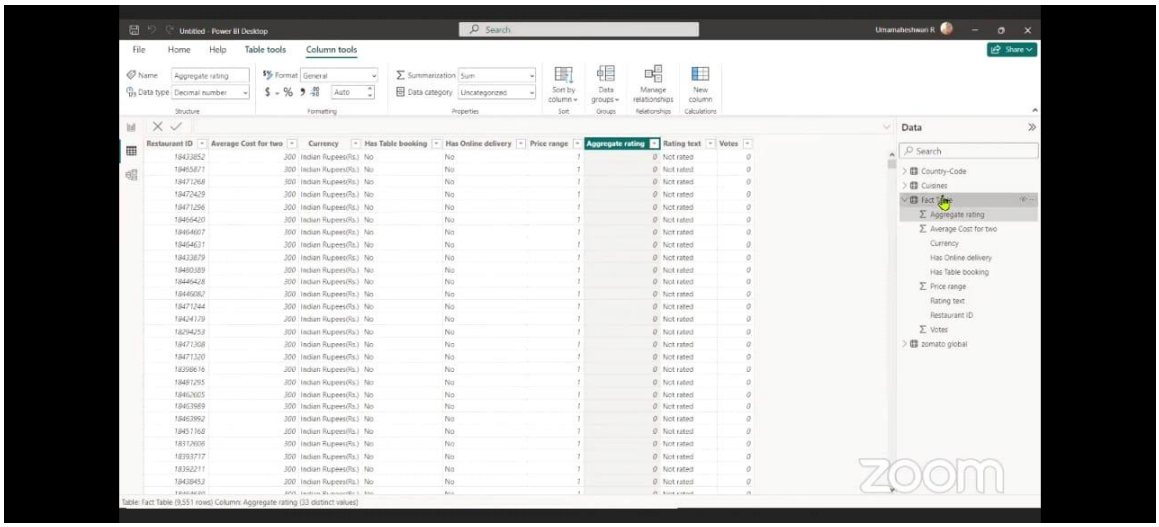
Credit Rating and Loan Status

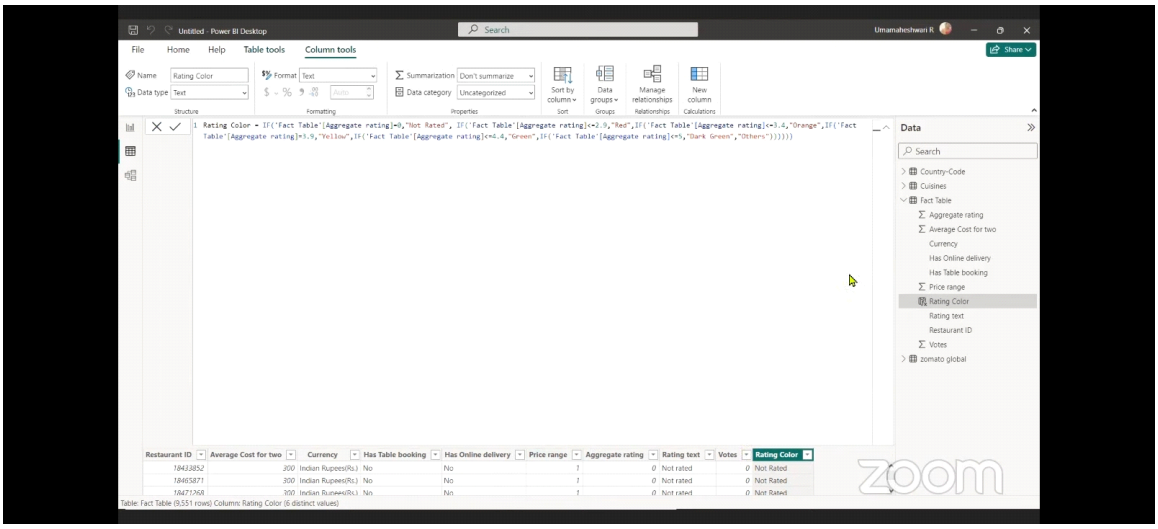
As the Loan status uses A, B, C, D which are not reader friendly. We can add a column to represent what it stands for, we also simplify the classification of those

with late or default on payment as bad credit, refer to the table below for details on the new columns added.

Values of such as “account Id” have also been set as Text.

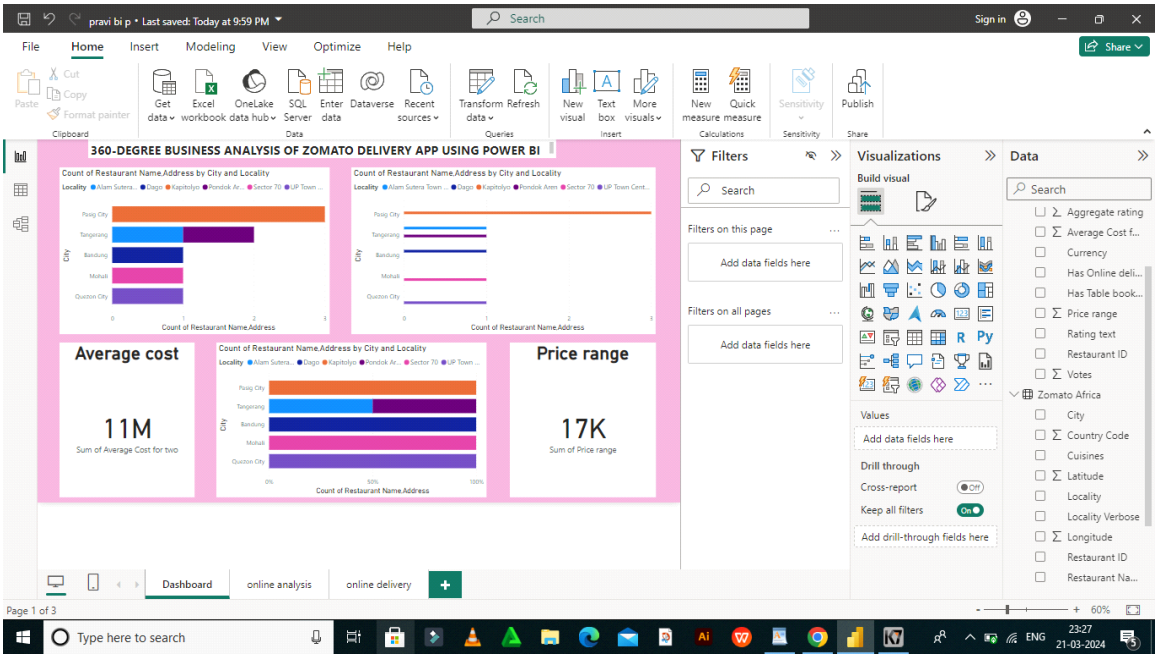
And District name have been categorized as place to be use for the map to show the sum of the inhabitants in each region.





Dashboard


Data Analysis of 360-degree about Delivery apps
ORDER
Data Sets
Rating
increased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Search
Sign in
File
Home
Insert
Modeling
View
Optimize
Help
Share
360-DEGREE BUSINESS ANALYSIS OF ZOMATO DELIVERY APP USING POWER BI
Count of Restaurant Name,Address by City and Locality
Average cost
11M
Sum of Average Cost for two
Price range
17K
Sum of Price range
Filters
Search
Filters on this page
Add data fields here
Filters on all pages
Add data fields here
Visualizations
Build visual
Values
Add data fields here
Drill through
Cross-report
Keep all filters
Add drill-through fields here
Data
Search
Aggregate rating
Average Cost f...
Currency
Has Online deli...
Has Table book...
Price range
Rating text
Restaurant ID
Votes
Zomato Africa
City
Country Code
Cuisines
Latitude
Locality
Locality Verbose
Longitude
Restaurant ID
Restaurant Na...
Dashboard
online analysis
online delivery
Page 1 of 3
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ENG
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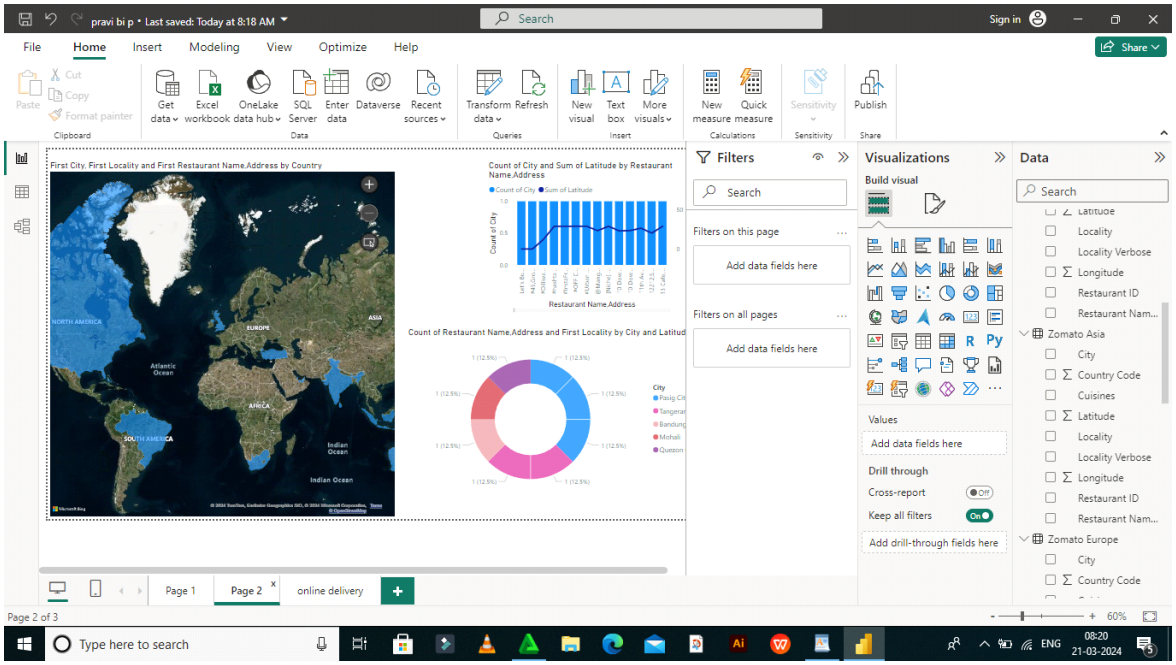
21-03-2024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Search
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File
Home
Insert
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View
Optimize
Help
Share
First City, First Locality and First Restaurant Name,Address by Country
Count of City and Sum of Latitude by Restaurant Name,Address
Count of Restaurant Name,Address and First Locality by City and Latitud
Filters
Search
Filters on this page
Add data fields here
Filters on all pages
Add data fields here
Visualizations
Build visual
Values
Add data fields here
Drill through
Cross-report
Keep all filters
Add drill-through fields here
Data
Search
Locality
Locality Verbose
Longitude
Restaurant ID
Restaurant Nam...
Zomato Asia
City
Country Code
Cuisines
Latitude
Locality
Locality Verbose
Longitude
Restaurant ID
Restaurant Nam...
Zomato Europe
City
Country Code
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Page 2
online delivery
Page 2 of 3
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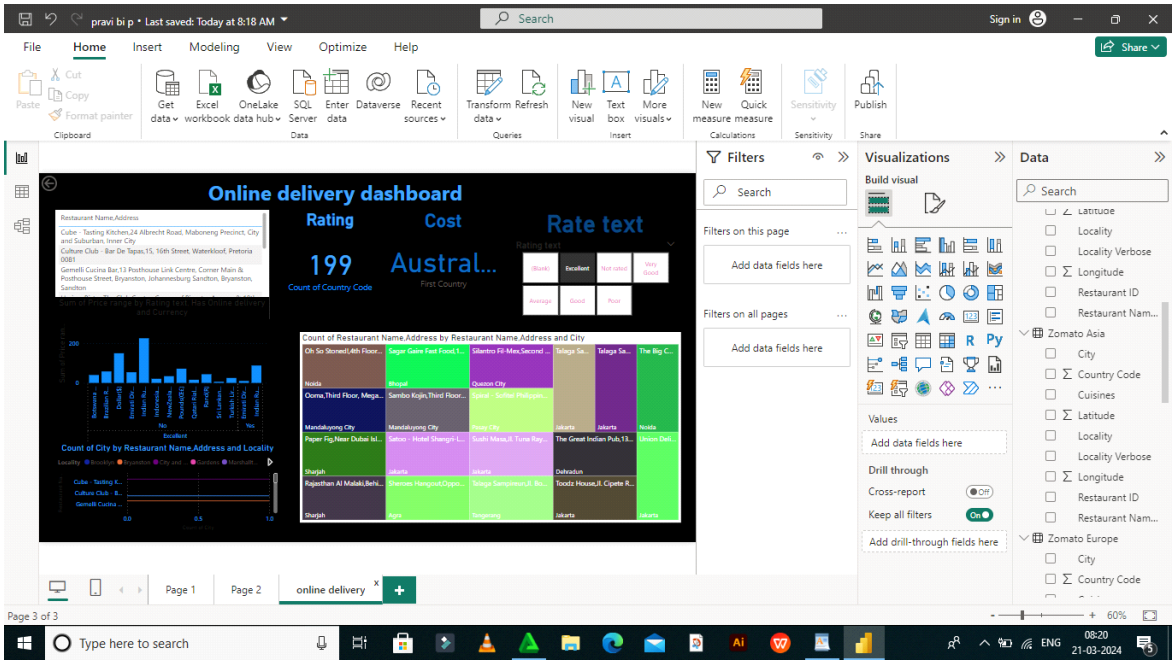
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Search
Sign in
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Home
Insert
Modeling
View
Optimize
Help
Share
Online delivery dashboard
Rating
Cost
Rate text
199
Count of Country Code
Austral...
First Country
Count of City by Restaurant Name,Address and Locality
Count of Restaurant Name,Address by Restaurant Name,Address and City
Filters
Search
Filters on this page
Add data fields here
Filters on all pages
Add data fields here
Visualizations
Build visual
Values
Add data fields here
Drill through
Cross-report
Keep all filters
Add drill-through fields here
Data
Search
Locality
Locality Verbose
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Restaurant ID
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online delivery
Page 3 of 3
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21-03-2024

CONCLUSION

After conducting a comprehensive 360-degree analysis of online delivery apps, several key conclusions emerge. Firstly, the industry has experienced exponential growth driven by changing consumer behavior, especially heightened by the COVID-19 pandemic. This growth is evident in the proliferation of delivery platforms offering a wide array of services ranging from food and groceries to pharmaceuticals and pet supplies.

Secondly, competition within the online delivery sector is fierce, with numerous players vying for market share. This competition has led to innovations in technology, service offerings, and customer experience to differentiate brands and capture consumer loyalty. Additionally, the presence of both local and international players in various markets adds to the competitive landscape, prompting companies to continuously refine their strategies to stay ahead.

Thirdly, consumer expectations have evolved, demanding faster delivery times, seamless user experiences, and an emphasis on sustainability and ethical practices. Meeting these expectations requires ongoing investment in technology infrastructure, logistics optimization, and partnerships with local businesses.

Furthermore, regulatory challenges and labor issues present significant hurdles for online delivery platforms, ranging from compliance with food safety regulations to managing the

welfare of delivery workers. Navigating these challenges requires a delicate balance between operational efficiency, regulatory compliance, and corporate social responsibility.

In conclusion, while online delivery apps offer convenience and accessibility to consumers, success in this competitive landscape hinges on a holistic approach that addresses technological innovation, consumer preferences, regulatory compliance, and social responsibility. Moving forward, companies must remain agile and adaptable to navigate the ever-changing dynamics of the online delivery ecosystem and sustain long-term growth.

FUTURE SCOPE

.The future scope for 360-degree business analysis in online delivery apps is immense. As technology continues to advance, these apps are poised to become even more integral to our daily lives. With the rise of artificial intelligence and machine learning, these platforms can leverage data analytics to understand consumer behavior, optimize delivery routes, and personalize user experiences.

Additionally, as the world becomes more interconnected, online delivery apps have the potential to expand globally, tapping into new markets and demographics. This could include reaching rural areas previously underserved by traditional retail outlets, as well as catering to niche markets with specialized delivery needs.

Moreover, with the growing emphasis on sustainability and eco-consciousness, there's an opportunity for online delivery apps to adopt green practices, such as optimizing delivery routes to reduce carbon emissions and offering eco-friendly packaging options.

Furthermore, the integration of emerging technologies like augmented reality (AR) and virtual reality (VR) could revolutionize the shopping experience, allowing users to visualize products in their own space before making a purchase.

Overall, the future of online delivery apps holds promise for continued innovation and growth, driven by advancements in technology, changing consumer preferences, and the pursuit of more efficient and sustainable business practices.

github link

https://github.com/Pravina17/360-degree-business-analysis-of-online-delivery-apps

REFERENCES

https://mavenanalytics.io/project/908.htm

LINK

https://github.com/Pravina17/360-degree-business-analysis-of-online-delivery-apps