Tech Saksham

Case Study Report

Data Analysis with Power BI

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

"A.P.C.MAHALAXMI COLLEGE FOR WOMEN"

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ABSTRACT

Online delivery systems have seen an unprecedented evolution since the COVID-19 Pandemic outbreak and the ensuing lockdowns. Despite the fact that when we think of food delivery, technology is not the first thing that comes to mind, it is becoming an increasingly important aspect of the online food delivery sector. Numerous opportunities are emerging on the web as a result of the significant rise in awareness of the internet and the technologies connected to it. Because of the internet, so many enterprises and companies may now easily start their own businesses. Online food delivery is one of these businesses made possible by the internet. Many restaurants have chosen to concentrate on quick preparation and speedy delivery of orders rather than providing a rich dining experience in the age of fast food and takeout. The majority of these delivery orders were previously placed over the phone, however this technique has significant drawbacks. Therefore, we propose a Java-based online food delivery system. The clients can use our system with ease. It eliminates the drawbacks of the conventional queuing mechanism. Our system is an easy way to order food from restaurants and get a mess service online. This system enhances the process of taking consumer orders. Customers can easily place orders as they like using the online food ordering system, which sets up a food menu online. Additionally, clients can simply follow orders if there is a food menu. For hassle-free delivery operations, it also provides a good tracking option for the delivery agents. The suggested online food delivery system here not only makes things easier for users, but it also makes things easier for delivery agents, restaurant management, food orders, and administrative tasks. The proposed system updates the menu with all alternatives and displays a user interface to make it easier for customers to complete their tasks.

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CHAPTER 1

INDRODUCTION

Online food ordering is the way to order food through various online web and mobile applications from nearby restaurants, café as per customer's choice and requirement. First and foremost, consumers put an order on the website/phone app with a registered member id which includes contact details and the current location of the shopper. After that, the restaurant collects the order via the dashboard or application. Similarly, the restaurant ensures the buyer regarding order confirmation via automated phone call or email. The orders are submitted in the app or website, where all the menus are posted from different restaurants. When a restaurant receives an order from the food delivery app, then the restaurant notifies the delivery company of the time to collect the package and the address of the destination. The delivery process has two different possible scenarios such as by the delivery person who is employed with the restaurant or by the company. On-demand food delivery startups have the same conceptual value in the on-demand wealth- all food delivery start-ups want to save people time and effort when it comes to ordering food and getting food.

1.1 Problem Statement

"Different food delivery applications often provide different offers or discounts.

Users are also not satisfied with their delivery time and random cancellations.

Suggest an app which can solve these problems and increase user interaction."

The current food delivery applications provide different discounts on the same item but in different platform. It is also seen that delivery time of an item is not same in all the applications. Adding all the discounts and estimated delivery time of different food joints under a single interface will be economical and less time consuming.

1.2 Objectives of Food Delivery App

The food delivery app aims to provide an effective platform that connects customers and businesses and enables seamless food ordering and delivery methods.

Here are some goals of the food ordering app open source.

- The food delivery service software saves customers time from standing in long queues for takeaway orders.
- Provide a wide range of restaurant menus and allow customers to sample food from different cuisines.
- The online food delivery management system streamlines the ordering and delivery of food. It provides real-time tracking to customers updated.
- Offer loyalty awards, offers, and discounts to attract new customers and keep the existing ones.
- Help restaurants to grow their sales, visibility, and customer base.
- From the multi restaurant delivery service software, restaurants earn commissions from affiliated eateries.

- Restaurants can gather useful customer data that helps them in making better decisions.

1.3 Advantages

There are many advantages to using a food delivery system. Here are just a few of them:

It's Convenient

One of the biggest advantages of food delivery is that it's convenient. Customers don't have to leave their homes or offices to enjoy a delicious meal. They can simply place an order and have it delivered right to their doorsteps.

It Saves Time

Another advantage of food delivery is that it saves time. Customers don't have to spend time cooking or traveling to and from a restaurant. Instead, they can use that time to do other things, such as work or spending time with family and friends.

It's Affordable

Food delivery is also affordable. In most cases, the delivery fee is very reasonable. And in some cases, it's even free. Additionally, customers don't have to tip the delivery person, which saves even more money.

It's Available When You Need It

Another advantage of food delivery is that it's available when you need it. Most delivery services operate during regular business hours. However, there are some that deliver 24 hours a day, seven days a week. So, whether you're craving a late-night snack or an early-morning breakfast, you can usually find a food delivery service that will meet your needs.

It's Easy to Use

The food delivery system is also easy to use. Customers can order food from their favorite restaurants with just a few clicks of a button. And thanks to mobile apps, it's even easier to order food on the go.

1.4 Features

• Food ordering: Allowing the users to order their food on-the-go from two different restaurants.

• No minimum order: The customer does not have to a minimum amount to order from a restaurant.

• Table Booking: Enables the users to book a table at the listed restaurant of their choice with just a few taps and the wait time at the restaurant is eliminated.

• Explore Places: Offering the discovery and guide to the user for exploring nearby restaurants with pictures, reviews and map locations.

• One Many Schemes: Ordering from two places at the same time and with the powerful algorithm of Single Source Shortest Path will include the Pickups as Red and If all pickups are done than the order is ready to go and will not find out the single source path from that node to Delivery location.

1.5 Scope

The meal delivery app creates a dependable connection between customers and businesses. They drastically shorten wait times, enable employees to interact with clients more quickly, and facilitate order fulfillment, all of which increase client happiness. The customer benefits from these applications are tremendous and you need to make room for delivery app development this year. Customers have immediate access to a variety of restaurants and cuisines. You can establish your venture and take advantage of these customers demands.

CHAPTER 2

SERVICES AND TOOLS REQUIRED

2.1 Services Used

- Sales forecasts ML application goal is to reduce costs and inefficiencies in the supply chain level. It uses as input sell-out information, price, price elasticity, market demand data proxies to generate production and stock quantity suggestions to maximize sell-out while reducing cost and avoiding food waste.

- Route Planning's ML application goal is to achieve reduced delivery times and costs. Usually, neural networks that work with past data as input and suggest best fit scenarios for new routes.

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.

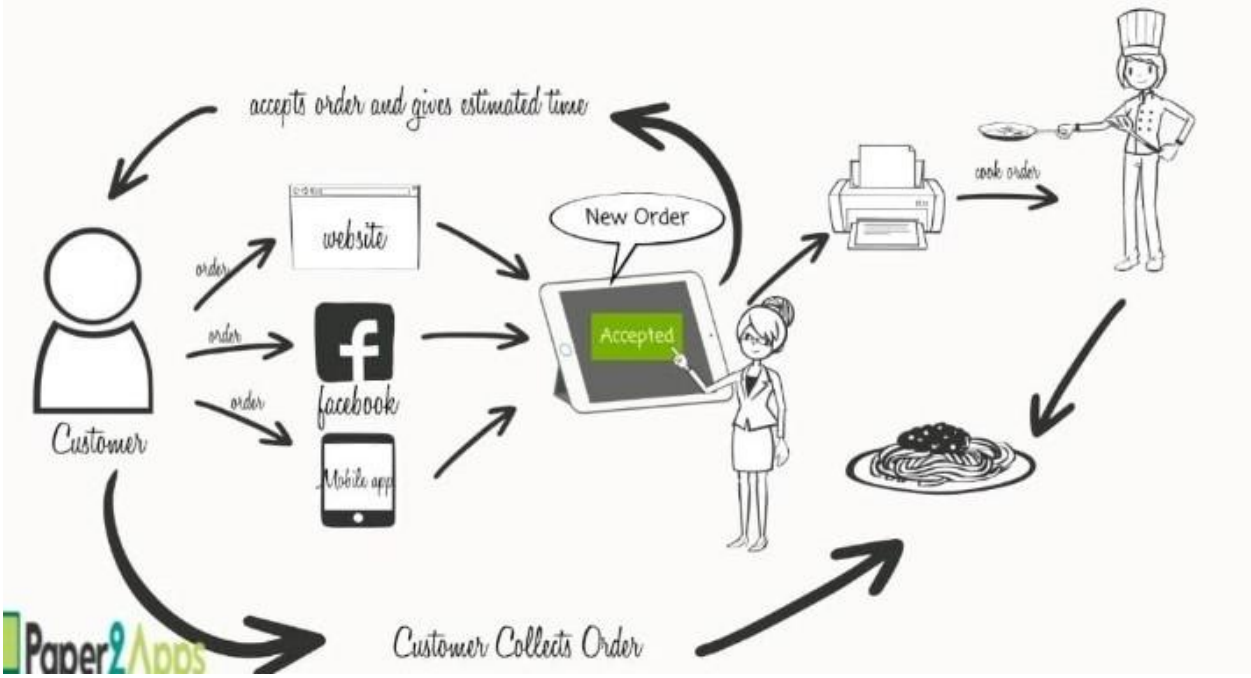
• PowerBI Service: This is an online Saas (Software as a Service) service that you use to publish reports, create new dashboards, and share insights.

• 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 high-level architecture for the project:

- **Order Acceptance:** Accept or decline incoming delivery orders.
- **Navigation Assistance:** Receive directions to the customer’s location.
- **Order Details:** Access information about the items in the order.
- **Real-time Tracking:** Allow both the driver and customer to track the delivery progress.
- **Communication:** Communicate with customers or the support team for updates.
- **Delivery Confirmation:** Confirm successful delivery to the customer.
- **Earnings Dashboard:** View earnings and order history in a dedicated dashboard.
- **Profile Management:** Manage personal information and account settings.
- **Notifications:** Receive alerts about new orders and updates.
- **Customer Feedback:** View ratings and feedback from customers.
- **Support Access:** Access customer support for assistance and inquiries.
- **User Management:** Administer user accounts, permissions, and access.
- **Restaurant Management:** Manage restaurant profiles, information, and partnerships.
- **Menu Management:** Control restaurant menus, items, and availability.
- **Order Management:** Monitor and oversee the lifecycle of customer orders.
- **Delivery Tracking:** Track delivery progress and ensure timely completion.
- **Analytics and Reports:** Generate insights from data and produce performance reports.

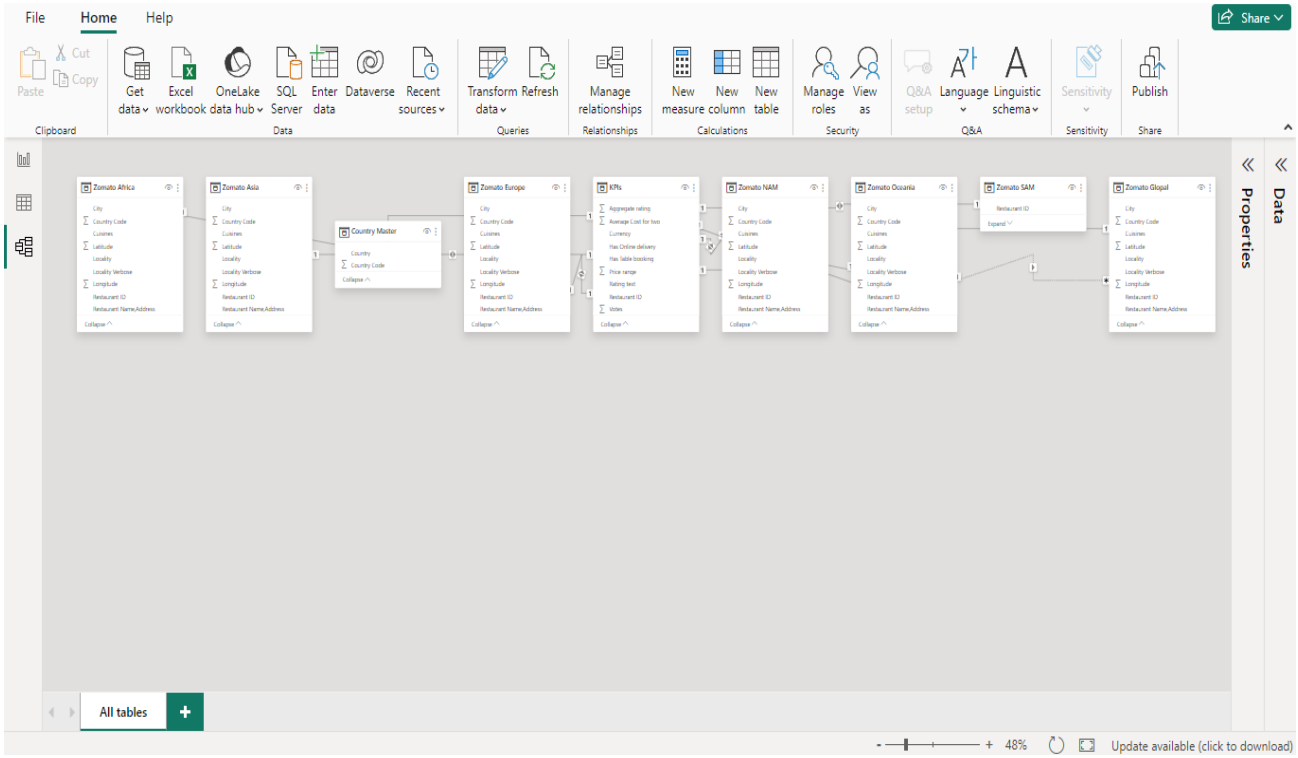
- **Promotions and Offers:** Create and manage promotional campaigns and discounts.
- **Support and Helpdesk:** Offer assistance to users and address inquiries.
- **Notifications:** Distribute updates, alerts, and announcements.
- **Payment Management:** Handle financial transactions and payment processing.
- **Content Management:** Control app content, such as images and descriptions.
- **Dashboard and Insights:** Access a central dashboard to overview app operations.

CHAPTER 4

MODELING AND RESULTING

Manage relationship

1. Import the data from available Excel files
2. Data transformation
3. Remove any columns that aren't being used




```
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")))))
```



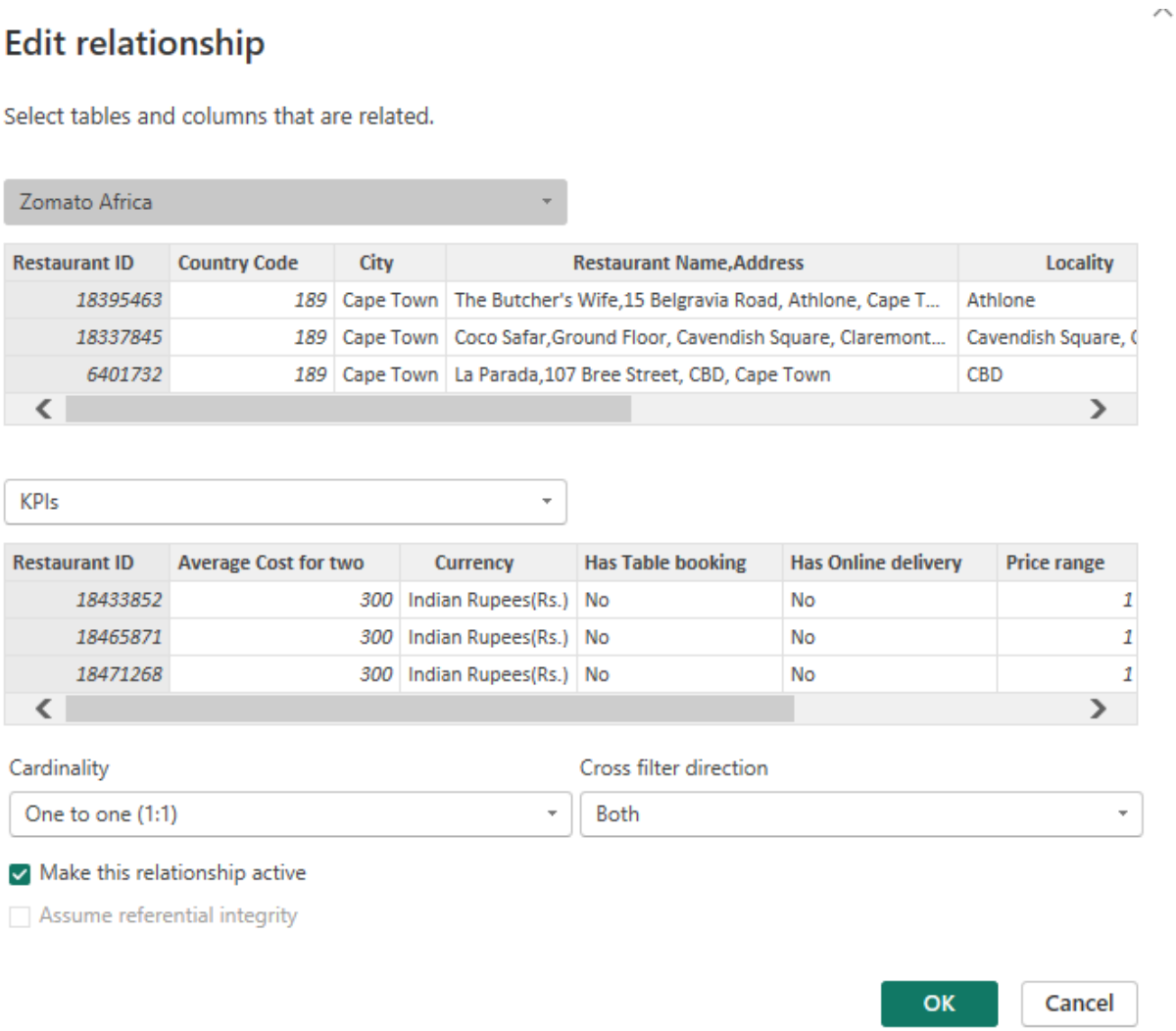

Manage relationships

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 Glopal (Latitude)	Zomato Oceania (Latitude)
☑	Zomato Glopal (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)

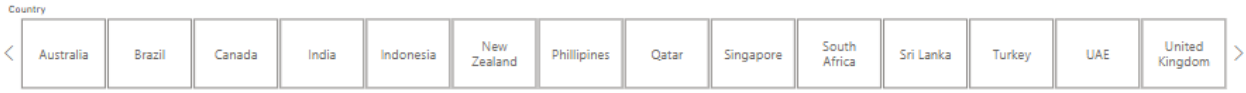
New... Autodetect... Edit... Delete

Close

Edit relationship



DASHBOARD



Has Online delivery
- No
- Yes

199
Count of Country Code

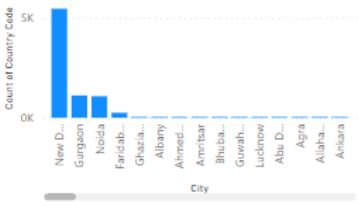
Price range
- 1
- 2
- 3
- 4

9551
Count of City

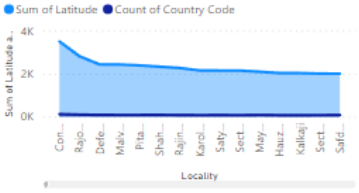
Has Table booking
- No
- Yes

1.50M
Sum of Votes

Count of Country Code by City



Sum of Latitude and Count of Country Code by Locality



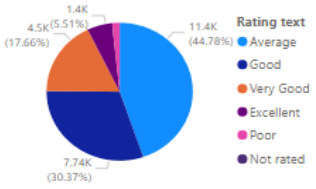
Has Table booking	Restaurant ID
No	89
No	103
No	143
No	147
No	148
No	149
No	154
No	157
No	158
No	159
No	171
No	175
No	176
No	177
No	179
No	180
No	181
No	182
No	185
No	186
No	188
No	189
No	191

Count of Country Code by Country

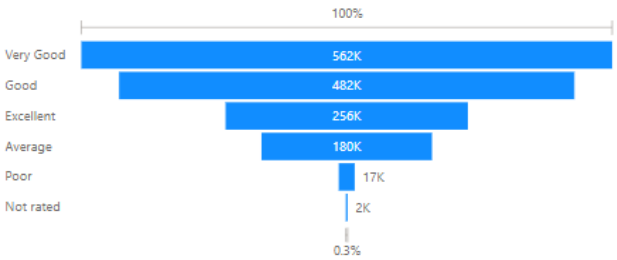
Sum of Longitude by Rating text

45.50K

Sum of Aggregate rating by Rating text



Sum of Votes by Rating text



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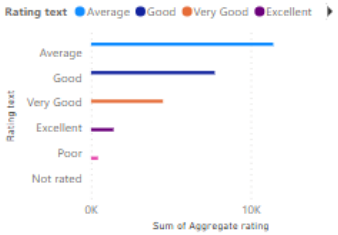
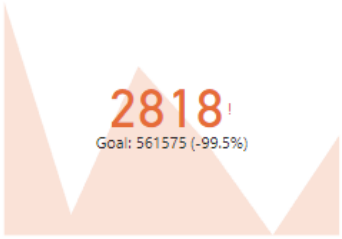
Sum of Average Cost for two by Rating text

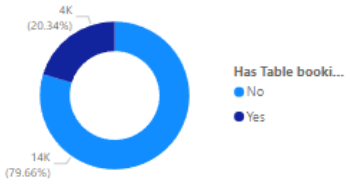
Sum of Aggregate rating by Rating text and Rating text



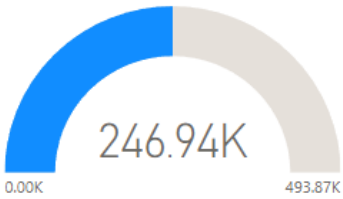
Sum of Price range and Sum of Votes by Rating text



Sum of Price range by Has Table booking



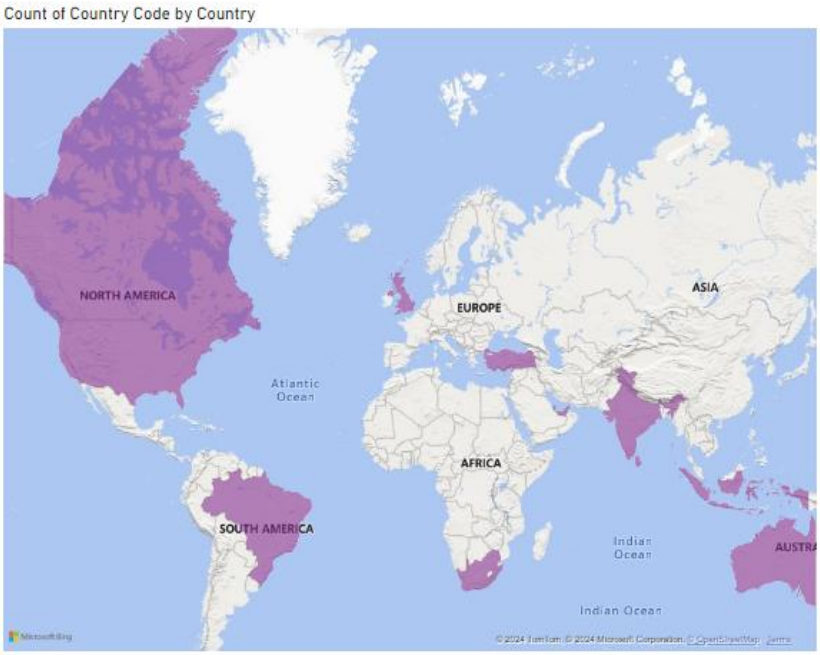
Sum of Latitude and city



Sum of Aggregate rating and Sum of Price range

City and Restaurant Name,Address

City	Sum of Votes	Rating text
Abu Dhabi	1829	Excellent
Abu Dhabi	268	Good
Abu Dhabi	3948	Very Good
Agra	70	Average
Agra	77	Excellent
Agra	843	Good
Agra	1072	Very Good
Ahmedabad	1521	Excellent
Ahmedabad	2351	Good
Ahmedabad	8394	Very Good
Albany	237	Average
Albany	1484	Good
Alice Springs	19	Average
Allahabad	932	Average
Allahabad	460	Good
Amritsar	635	Average
Amritsar	1856	Good
Amritsar	1174	Very Good
Ankara	115	Average
Ankara	663	Excellent
Ankara	123	Good
Ankara	1726	Very Good
Armidale	93	Good
Athens	3587	Excellent
Athens	728	Good
Athens	8435	Very Good
Auckland	4150	Excellent
Total	**1498645**	



CONCLUSION

The main purpose of this study is to determine consumer satisfaction of users of Online Food Delivery Services viewed from the hedonic value and utilitarian perspective value. Analysis of the data regression model was carried out to find out how much influence the independent (exogenous) variable had on customer satisfaction of Online Food Delivery Services users in Indonesia. This study investigates the effect of hedonic consumption values with respect to the use of Online Food Delivery Services which provides a positive response to services. Although one Value (V) variable does not significantly affect the hedonic value in Online Food Delivery customer satisfaction. This finding shows that consumers do not only focus on using OFD when there are promos or discounts.


FUTURE SCOPE

It is difficult for restaurants to catch up with new uncertainties of lockdown. The situation might worsen anytime, and businesses can shut again. But a food delivery app can help you keep up with challenging scenarios.

Apart from aiding in a challenging economy, a food delivery app is always a yes for a business. Studies identify that consumers rely on mobile apps for instant communication with business firms. Whether a restaurant chain owner or a street-side vendor, a food delivery app will improve your audience base and consumer interaction. Studies conclude that: at least eight out of ten consumers use smart phones and spend about 3.3 hours a day.

With each day, businesses are becoming more consumer-centric. They employ consumer data provided by these apps to understand trends and develop winning market strategies, thus boosting sales. Therefore a food vendor on boarding on a digital marketplace- a food delivery app- has an edge in the sector.

The food delivery apps and firms have seen quite a change in market priorities. From the first online menus to the rapid delivery services popping up in all major cities and offering delivery in under 15 minutes. Consumers fancy instant service and are willing to spend extra bucks for them. But catering hot and delicious food door to door has never been easy.

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