Tech Saksham
Case Study Report

Data Analytics 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

Startups in India become a talk of the town in world business scenario. Youngsters are coming up with innovative concepts to counterpart untouched concerned area of consumers. Currently Indian Online food market is$350billion.Food technology in broad area, online food delivery apps are just part of it. This conceptual study will give more insight about emerging innovative technologies in restaurant industry and strategies followed by online food startups Zomato, Swiggy.

From this research paper we would understand drivers of online food sites. Different services given by application that makes consumers happy and satisfied Comfort and Convenience which makes consumer more inclined towards online food ordering. The research concluded that due to urbanization in Indian landscape, online food delivery applications are growing with flying colors. Future of online food ordering website is bright.

Facilities, Comfort, User friendliness are the key features of online websites success.

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CHAPTER 1

INTRODUCTION

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 Proposed Solution

The solution to the challenges faced by online delivery apps lies in the implementation of Power BI for a comprehensive 360-degree business analysis. By harnessing Power BI's data integration, cleansing and visualization capabilities, businesses can gain deep insights into customer behaviour, operational efficiency and financial performance. This approach enables the identification of key trends, optimization opportunities and strategic decisions aimed at improving service quality, reducing costs and enhancing customer satisfaction. Leveraging Power BI for data-driven decision-making empowers online delivery apps to stay competitive, agile and responsive to evolving market dynamics, ultimately driving sustainable growth and success in the industry.

1.3 Feature

User-Friendly Interface: Intuitive and easy-to-use app interface for seamless navigation and ordering.

Order Tracking: Real-time tracking of orders from placement to delivery, enhancing transparency and customer satisfaction.

Multiple Payment Options: Support for various payment methods like credit/debit cards, digital wallets and cash on delivery.

Customizable Menus: Ability to customize menus, add special instructions and choose delivery preferences.

1.4 Advantages

1. It makes the process easier and smoother

2. Affordable Marketing

3. Reservation of delivery system

4. The convenience of using food delivery application

5. Greater reach

1.5 Scope

It is easy to forget how far food delivery services have come while waiting for the ordered meal and watching Sunday Night NFL. Be it chicken fingers and fries or chicken sandwich or mac 'n' cheese or sushi or pad Thai or iced coffee or milk tea or veggie burger- the most ordered online foods - are so quickly delivered that it feels like the food delivery apps have always existed. For World Wide Waiter(1995), it is perhaps true. However, the popular food delivery apps were incorporated either in the 2000s or 2010s. So, these food aggregators have been lingering in markets for about... a decade now. Yet these food delivery apps only rose in popularity during the lockdown last year. And perhaps most amazingly, almost every major food aggregator saw its gross merchandise volume and revenue increase by over 100% in 2020. Thereon things became interesting. In Q1 of 2020, the daily downloads of the food delivery apps in the US dropped from 265k to 185k. It, however, changed in the consecutive quarters. Food incumbents started with 15 minutes contact-less deliveries that turned out to be a game-changer. It turned out to be one of the most valuable and innovative propositions, forging the present landscape.

CHAPTER 2

SERVICES AND TOOLS REQUIRED

2.1 Services Used

Cloud Computing Services: Leveraging cloud platforms like Amazon Web Services (AWS), Microsoft Azure or Google Cloud Platform for scalable and reliable infrastructure.

Payment Gateways: Integrating with payment gateways such as PayPal, Stripe or Square for secure and efficient online transactions.

Location-Based Services: Utilizing GPS technology for accurate location tracking, delivery routing and estimation of delivery times.

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:

Data Collection Storage: Utilize Power BI's data integration capabilities to collect data from various sources such as user orders, delivery times, customer feedback and payment transactions. Store the collected data in a suitable data storage solution such as a cloud-based data warehouse (E.g., Azure SQL Data Warehouse, Amazon Redshift) or a relational database (E.g., MySQL, PostgreSQL)

Data Modeling and Transformation: Use Power BI Desktop to perform data modeling and transformation tasks. Create relationships between different data tables, define calculated columns and apply data cleansing and formatting as needed.

Dashboard Creation: Develop interactive dashboards and reports using Power BI Desktop. Include visuals such as charts, graphs, maps and KPI indictors to showcase key

metrices related to order volumes, delivery performance, customer feedback and financial data.

Real-time Monitoring: Utilize Power BI's real-time streaming capabilities to monitor and visualize data updates in real time. Implement alerts and notifications based on predefined thresholds or anomalies using Power BI Service.

Integration with Backend Systems: Integrate Power BI reports and dashboards with the backend systems using Power BI Embedded or Power BI API.

Data Analysis and Insights: Leverage Power BI's advanced analytics features to perform in-depth data analysis, trend analysis and predictive modeling.

Security and Compliance: Ensure data security and compliance with regulatory requirements (E.g., GDPR, PCI DSS) by implementing role-based access control (RBAC), data encryption and audit logging in Power BI.

By integrating Power BI into the project architecture, you can empower decision-makers and stakeholders with data-driven insights, improve operational efficiency and enhance the overall user experience of the online delivery app.

CHAPTER 4

MODELING AND RESULT

Manage relationship
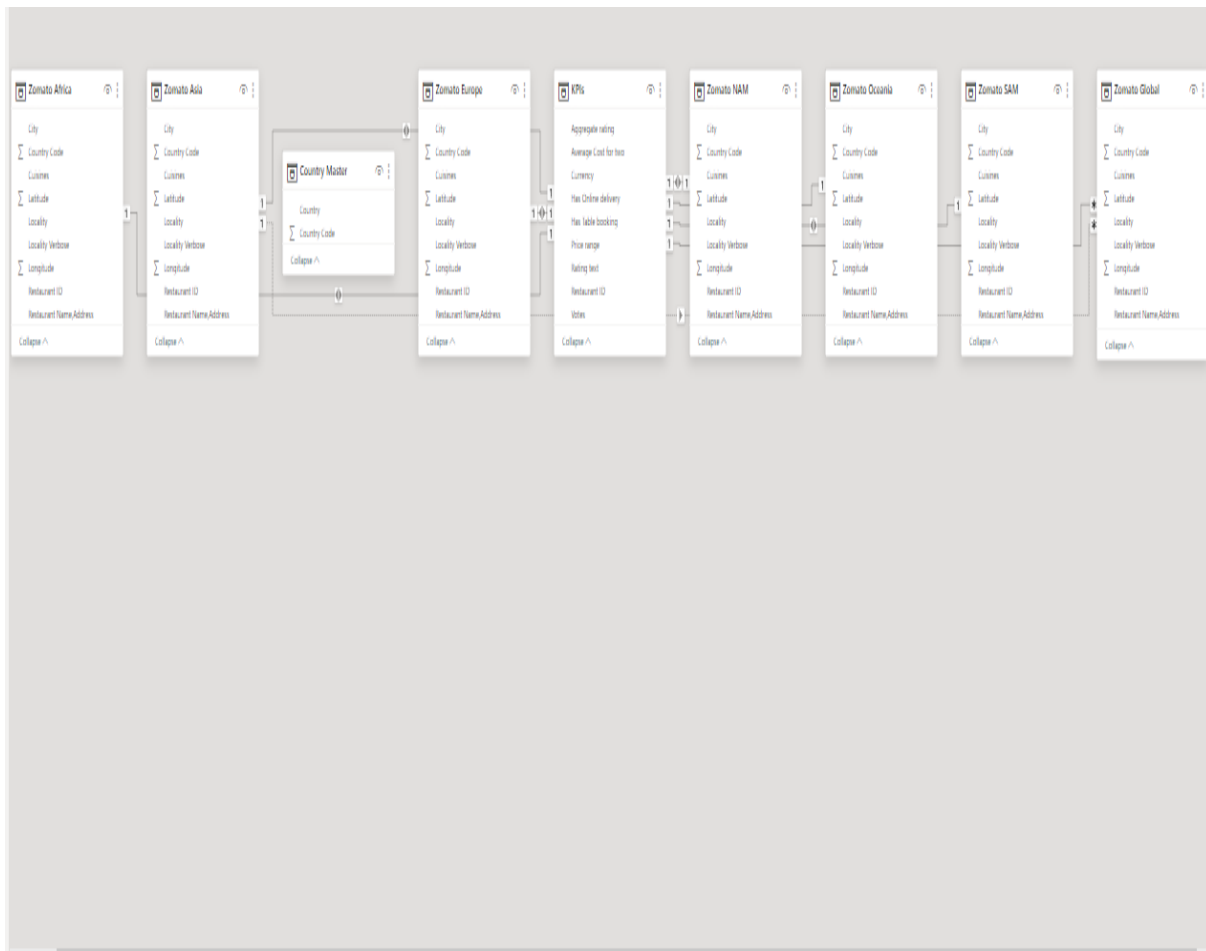
Manage relationships

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 (Restaurant ID)	KPIs (Restaurant ID)
☐	Zomato Global (Restaurant Name,Address)	Zomato Asia (Restaurant Name,Address)
☑	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

Select tables and columns that are related.

Zomato Africa ▾

Restaurant ID	Country Code	City	Restaurant Name,Address	Locality
18395463	189	Cape Town	The Butcher's Wife,15 Belgravia Road, Athlone, Cape T...	Athlone
18337845	189	Cape Town	Coco Safar,Ground Floor, Cavendish Square, Claremont...	Cavendish Square, (
6401732	189	Cape Town	La Parada,107 Bree Street, CBD, Cape Town	CBD

KPIs ▾

Restaurant ID	Average Cost for two	Currency	Has Table booking	Has Online delivery	Price range
18433852	300	Indian Rupees(Rs.)	No	No	1
18465871	300	Indian Rupees(Rs.)	No	No	1
18471268	300	Indian Rupees(Rs.)	No	No	1

Cardinality

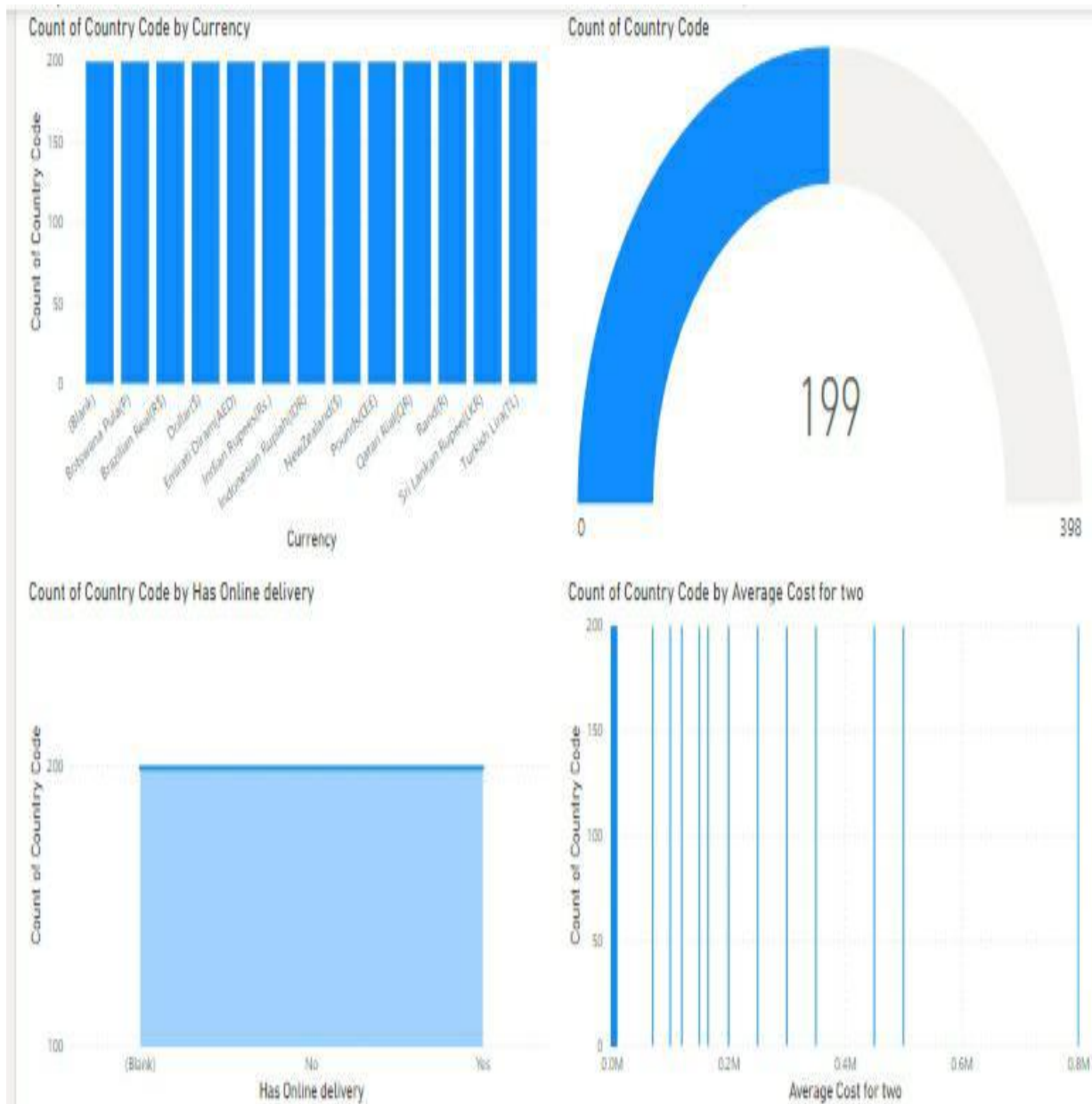| One to one (1:1) ▾ |
|---|

Cross filter direction

Both ▾

☑ Make this relationship active

☐ Assume referential integrity

OK   Cancel

Dashboard

Count of Country Code by Currency

Count of Country Code

Count of Country Code by Has Online delivery

Count of Country Code by Average Cost for two

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Sum of Latitude by City

Count of Country Code by Cuisines

Sum of Longitude by City

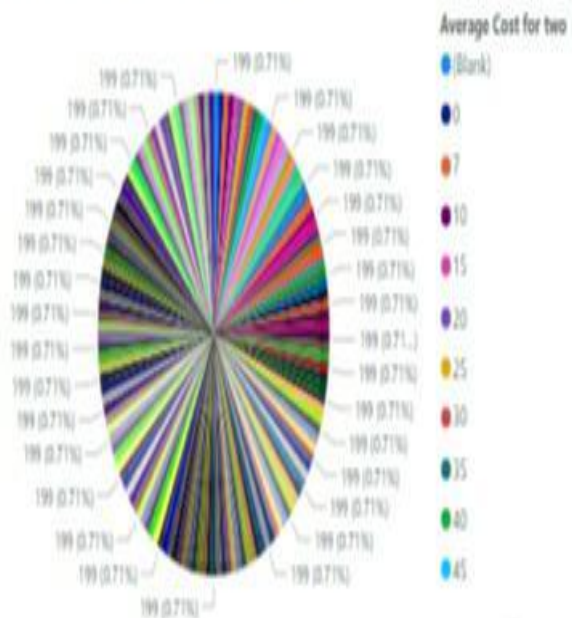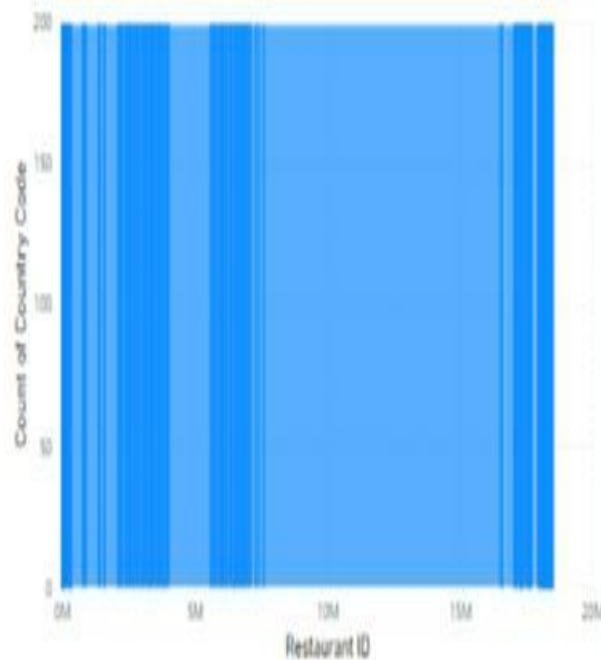| City	Restaurant ID	Restaurant Name, Address
Abu Dhabi City	5700052 Restaurant ID	Cho Gao - Crowne Plaza ... Restaurant Name, Address
Abu Dhabi City	5700386 Restaurant ID	Sangeetha Vegetarian Res... Restaurant Name, Address
Abu Dhabi City	5701052 Restaurant ID	Applebee's Level 3, Mushr... Restaurant Name, Address
Abu Dhabi City	5701446 Restaurant ID	Olive Garden, Level 3, Al ... Restaurant Name, Address
Abu Dhabi City	5701548 Restaurant ID	Bait El Khetyar, Al Najda St... Restaurant Name, Address

Count of Country Code by Average Cost for two

Count of Country Code by Restaurant ID

Count of Country Code by Price range
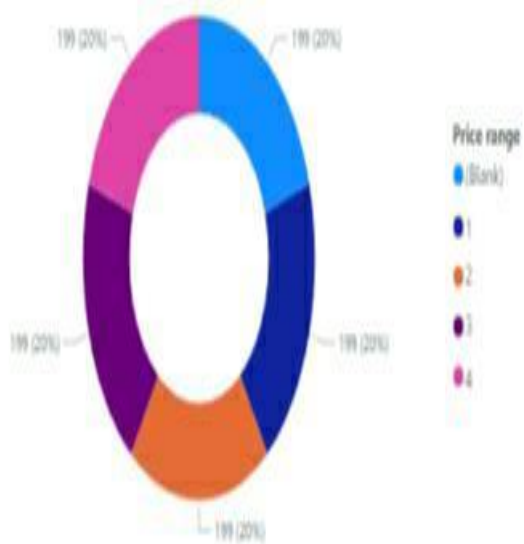
Count of Country Code by Votes
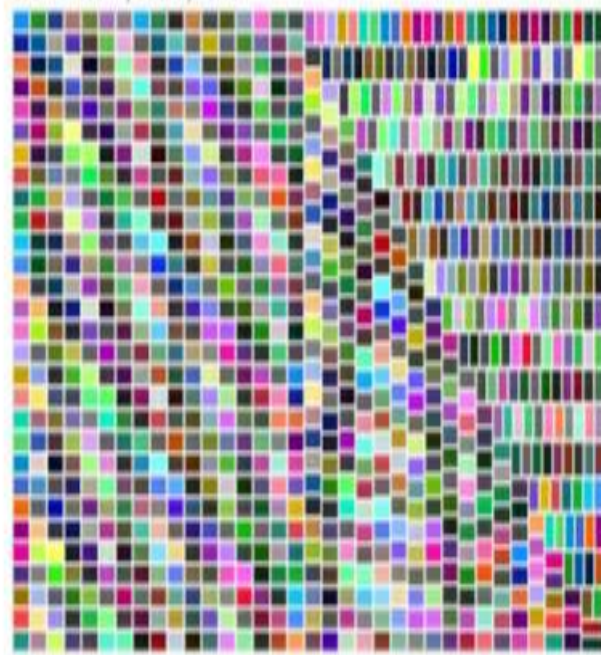
CONCLUSION

The food delivery apps are competing at their best to drive in consumers. Dozens of rapid delivery services use ghost kitchens located in city centers to quickly fulfill multiple orders. Location intelligence, road patterns, traffic dynamics, weather, last mile supply availability, real estate values, and so on, has improved the efficiency of the food delivery apps and services. These have attracted investment and funding into segment. Several studies show that food delivery app businesses remain unprofitable, at the same time, there is Door Dash which has made profits. The food delivery business is tough and a high operational efficiency is needed to run it but it is commendable for food vendors to enlist themselves in the food delivery apps. If you have the formula and still to run highly efficient operations then this is the sector and time to take the plunge.

FUTURE SCOPE

The companies selling products online should try to retain their current customers and focus on attracting the non-users by making them aware of benefits like convenience and authenticity of products delivered to them online. the study states that still people in India is relucent to buy products online with respect to authenticity. The companies should make people believe that the products sold to them are genuine and if in case, products delivered to them are damaged or spoiled, they should immediately exchange or replaced. The customer should be made aware of other benefits of shopping online like delivery on time and discounted products to the local retailer.

In such a technological era, people find it difficult to visit restaurants. Most often, they are unable to manage the time to pick up their orders. Therefore, most of them like to use the food delivery app. it provides them with the option to choose the menu ass per them choice and place the order instantly with a few clicks.

The future scope of the project is vast. In future many people will benefit with these kinds of online food delivery apps.

REFERENCES

https://www.olafusimichael.com/2020/04/fully-online-delivered-power-bi-and.html