Tech Saksham

Case Study Report

Data Analytics with Power BI

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

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ABSTRACT

In the digital age, data has become an invaluable asset for businesses. The proposed project, “360-degree Business Analysis of Online Delivery Apps” aims to leverage Power BI, a leading business intelligence tool, to analyze and visualize real-time customer data. Online food ordering 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 selected food menu items just few minutes. In the modern food industries allows to quickly and easily delivery on customer place. Restaurant employees then use these orders through an easy to delivery on customer place easy find out navigate graphical interface for efficient processing.

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CHAPTER 1

INTRODUCTION

1.1 Problem Statement

Imagine you meet a small startup company planning to launch an Online Food Delivery System like Swiggy/Zomato that allows consumers & service providers to interact in real-time. They want to support both Mobile App and Web-based applications. Like many small start-ups, they are confident that they will be the next big thing and expect significant, rapid growth in the next few months. With this in mind, they are concerned about the following:

- Scaling to meet the demand, but they are not sure when and how the demand will grow — they are very concerned about buying too much infrastructure too soon or not enough too late!
- Effective distribution of load
- The ability for Service Providers to send notifications to consumer
- Configurable database/s and data access layer to yield high performance and throughput
- Allocate food delivery personal efficiently
- Design for easy onboarding and searchability of restaurants
- Prediction of the food delivery time for order

1.2 Proposed Solution

The proposed solution is to develop a Power BI dashboard that can analyze customer reviews and rating on food.

- Ever growing market

The population is increasing day by day, the internet user is increasing too. And so, will the market of online food delivery services will grow in the upcoming days.

- Business Expansion Opportunities

Large areas are not yet covered by the online food delivery services, there will be so much expansion opportunities for any of the online food delivery services.

• Availability of riders

Availability of riders is a huge opportunity for these online food delivery services. A number of people has interest in making money through these sorts of service providing

1.3 Feature

- **Real-Time Analysis**: The dashboard will provide real-time analysis of customer data based on food.
- **Customer Segmentation**: It will segment customers based on various food like vegan or non-vegetarian.
- **Trend Analysis**: The dashboard will identify and display trends in customer favor.
- **Predictive Analysis**: It will use historical data to predict future customer behavior.

1.4Advantages:

An online ordering system can help restaurants to build and retain customer loyalty. The major reason is that it allows modern-day customers to place an order easily.

Also, customers can re-order their favorite food items without waiting in a big queue. These benefits help restaurants to improve relationships with customers and increase their sales.

1.5 Scope:

Restaurants can offer electronic ordering both through their own online web or mobile site and through sites that serve various restaurants, and all restaurants also accept orders via text message more over the credit point and discount coupen out that many restaurants increased sales level as a result of accepting electronic orders. The restaurant now a day interactive and up-to-date menu with all available options in an easy to use manner. Most of Younger consumers were more likely to have used online food ordering is essentially adoption on self- service approaches. Well-

designed self-service ordering systems give customers actual control over the pace of their transaction and allow them to limit the amount of personal interaction of restaurant. In most cases, an increased level of control has been shown to lead to higher level of customer satisfaction and greater intent to use or recommend suggested the service. Perceived convenience of a self-service system also leads to an increase in adoption and satisfaction. In this instance, the definition of convenience is related primarily to access convenience and transaction convenience. A customer will search for a favorite restaurant base on customer location, choose from available items. Payment can be amongst others either by credit card or cash.

CHAPTER 2

SERVICES AND TOOLS REQUIRED

2.1 Services Used

- **Data Collection and Storage Services**: The company should collect the information of the food is often ordered by the people.

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.

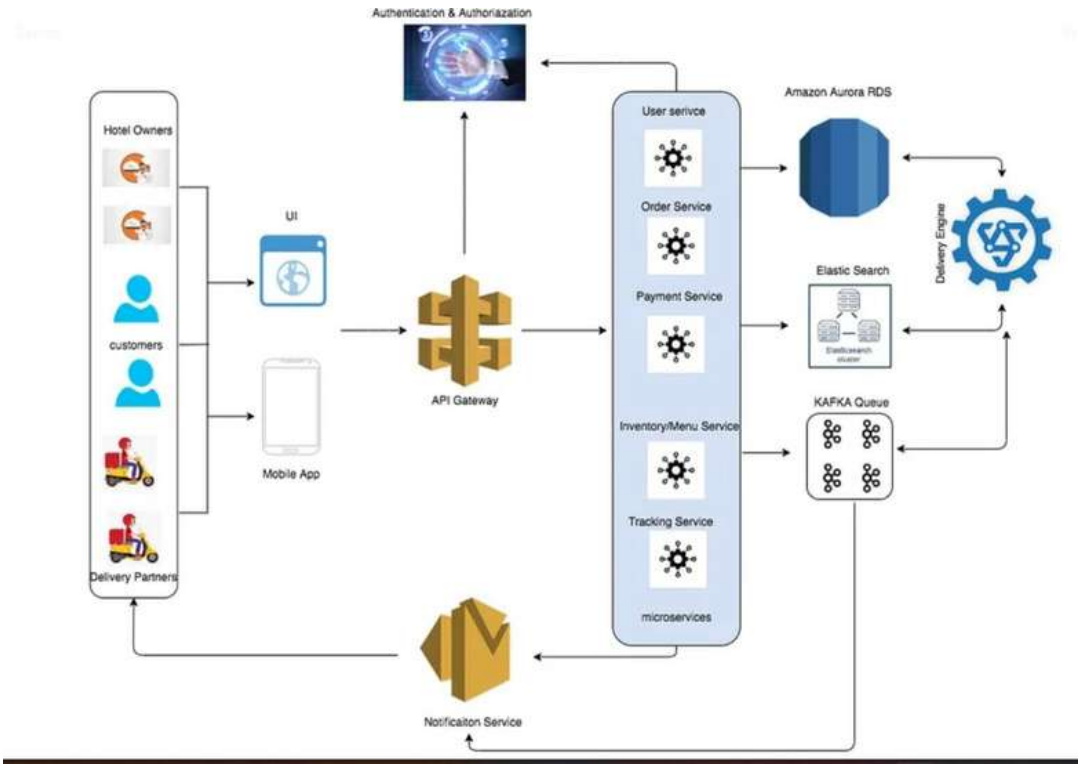
- **PowerBI Service**: This is an online SaaS (Software as a Service) service that you use to publish reports, create new dashboards, and share insights.

- **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 are considering here microservices-based architecture. Different services are listed in the architecture diagram

1. All requests made from a mobile app or UI will go to different services via the API gateway. API gateway will take care of load balancing and routing requests to services. This will authenticate and authorize the user and send back the token ID. This token is used for further communication

2. Different services like, user registration and management service, order service, payment service will use transactional databases. We will use the

Amazon Aurora relational database. This is a highly scalable database service to manage users and concurrent orders etc.

3. Information about different restaurants, their menu, price, offers, etc will be stored in JSON document storage in ElasticSearch. We can use a multi-node cluster here. Whenever a customer searches for a menu/cuisines it will be fetched from elastic search. Elastic search provides fast scalable search options

4. Once the user selects the dishes and quantity from the restaurant. He will go to the checkout option and then do payment. Different payment gateways and payment options are integration with the system and upon successful payments, the order is successfully placed

5. Once the order is placed all the information is sent to the central message Queue like Kafka. The order processing unit reads the order info and then notifies the selected restaurant about the order. At the same time, it searches for available delivery partners to nearby locations to pick up the order. It also gets the information like preparation time from the restaurant and estimated pickup time from the delivery partner based on his location and other details. it will select the best available delivery partner and he is notified about order and restaurant details

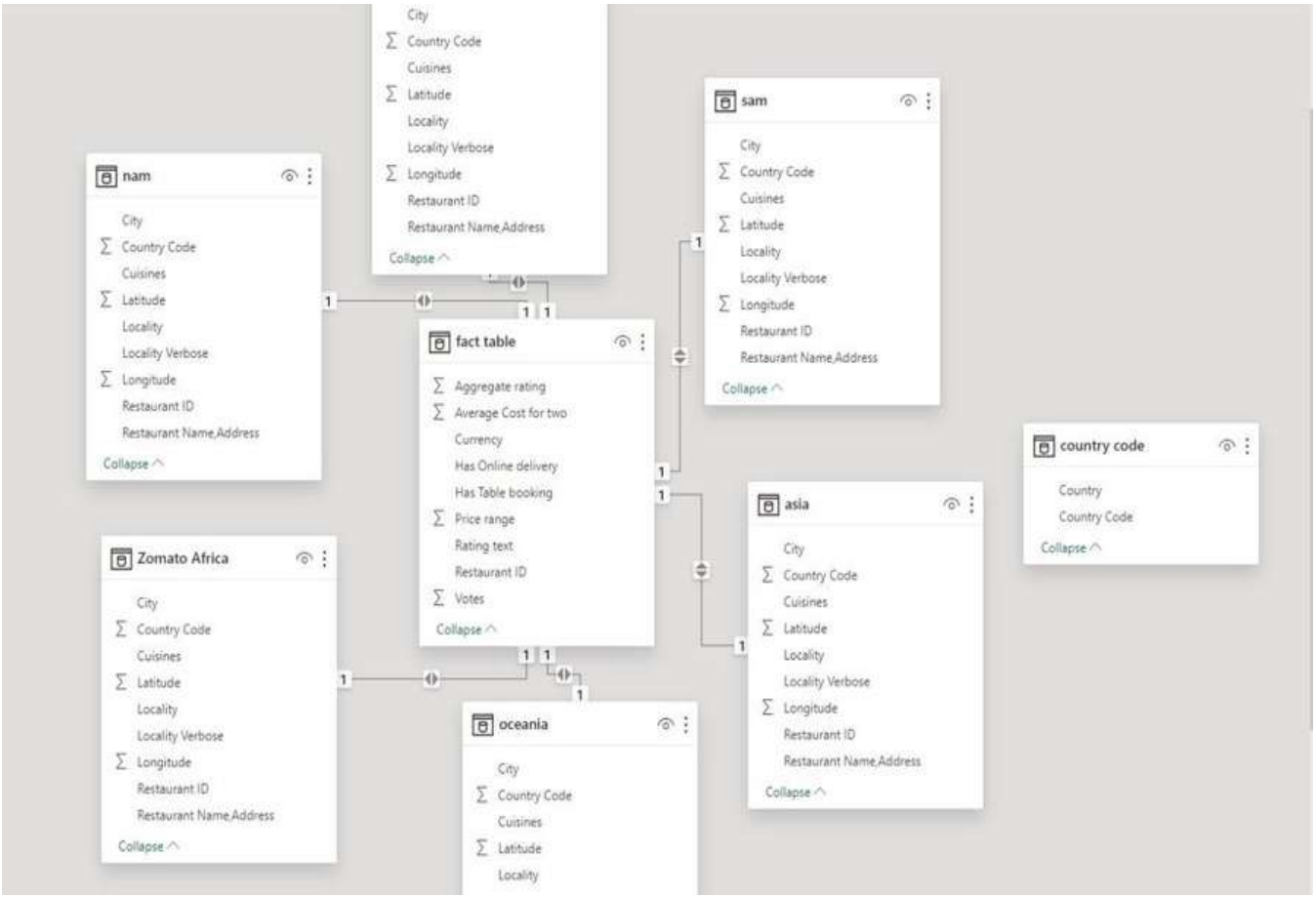
6. The user gets push notification about the order. The order processing and tracking service will work together and the user can track their order status, live location of the delivery person, etc

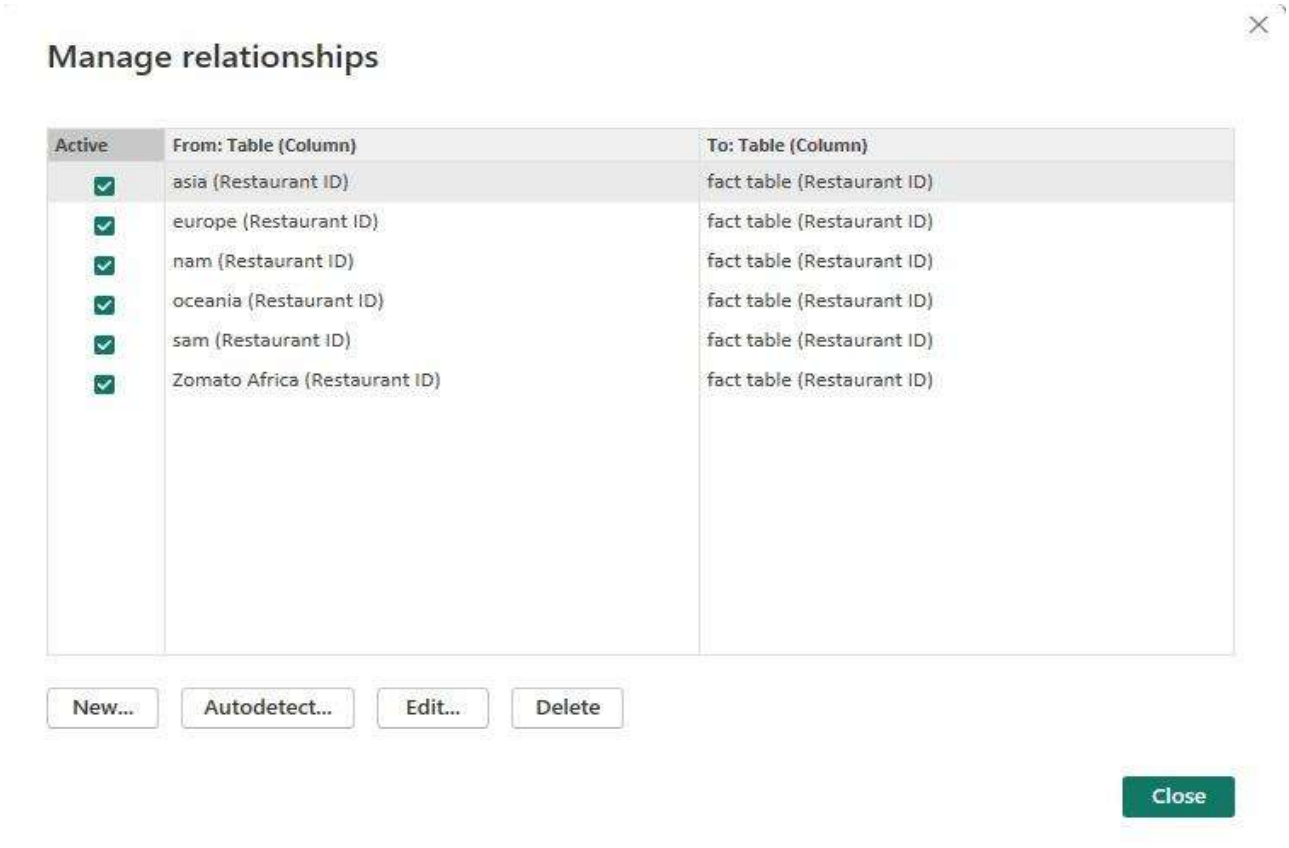
7. Delivery person pickup order and deliver to customers. Customer is real-time notified with ETA for the order

CHAPTER 4

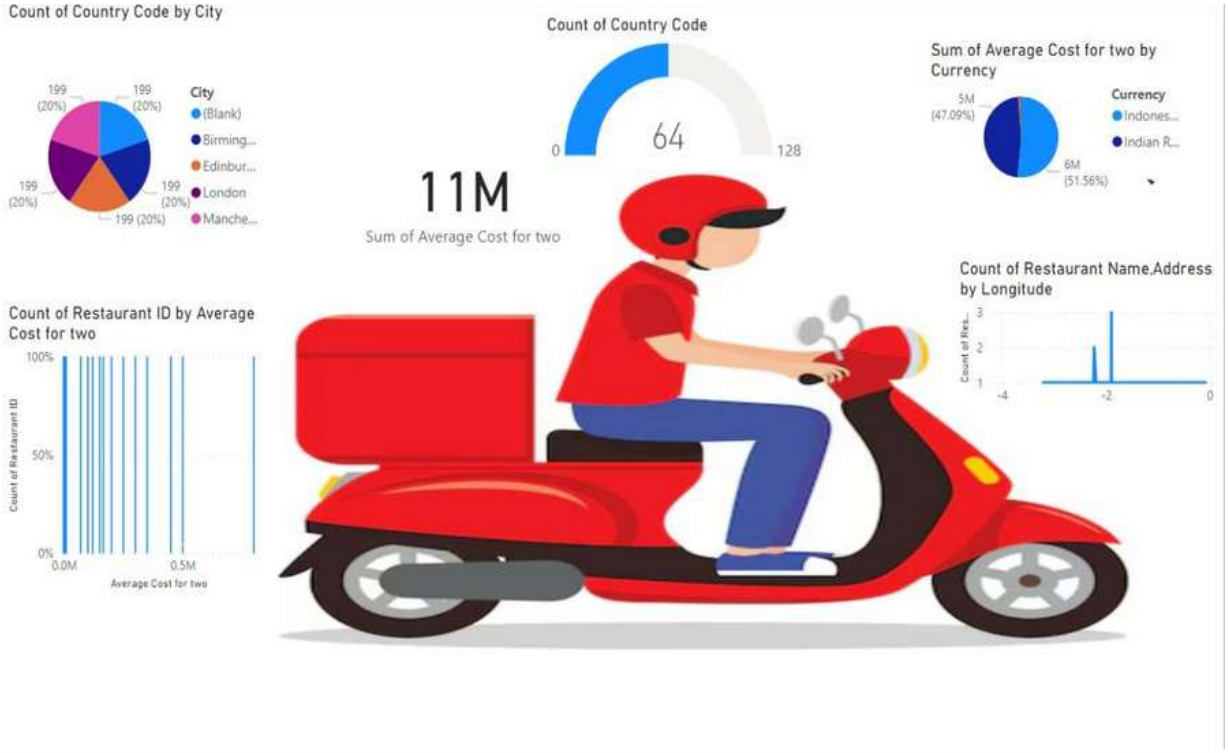
MODELING AND RESULT

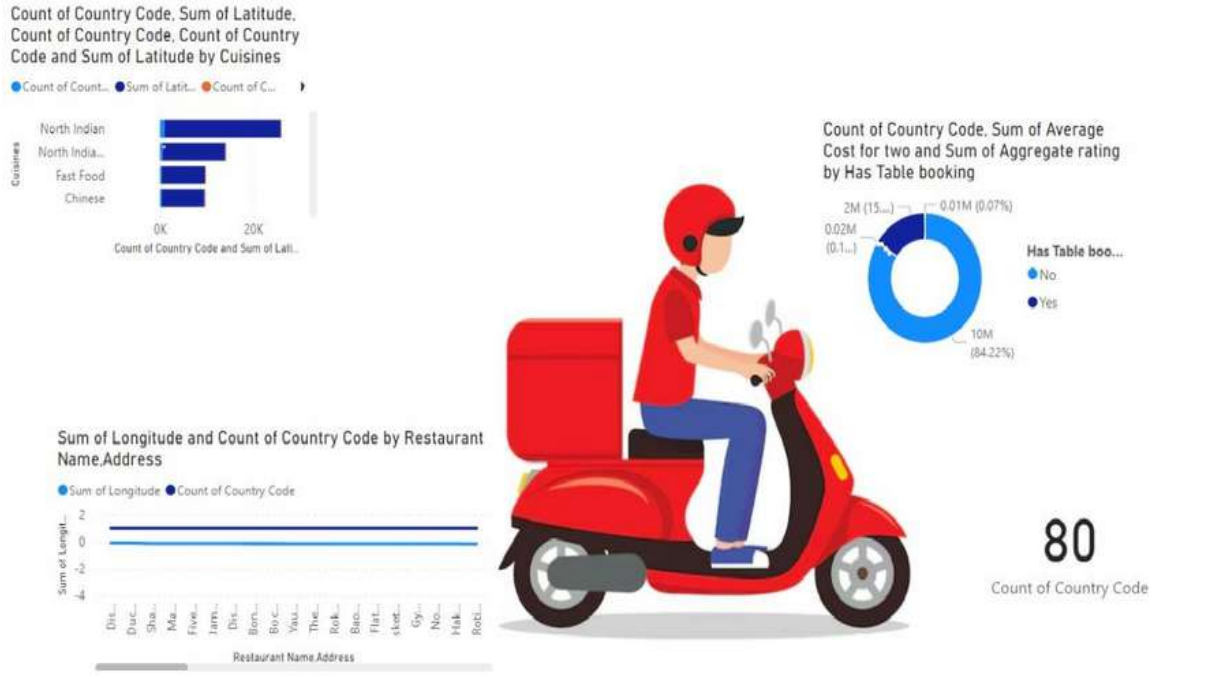
Manage relationship





Dashboard





CONCLUSION

The feature that attracts consumers the most is Doorstep Delivery at any place at anytime. Consumers are mostly motivated when they receive any Rewards & Cashbacks followed by loyalty points or benefits. The factors that block customers to try the online food delivery apps are Bad Past Experience, reviews, and word of mouth. By giving consistent and effective services this concept with innovation can be successfully grow. In future companies can target Tier 2 cities for expansion of business as these cities are also having numbers of working youngsters.

FUTURE SCOPE

The scope of food delivery app development is quite vast, as it involves creating a digital platform to facilitate the ordering and delivery of food from various restaurants to customers' locations. The popularity and convenience of food delivery apps have grown significantly in recent years, and they offer numerous benefits to all stakeholders involved - customers, restaurants, and delivery personnel.

The scope can vary depending on the specific requirements of the food delivery app and the scale of operations. Large food delivery platforms might require more complex features and scalability to handle a high volume of orders, while smaller local apps might focus on simplicity and localized service.

Overall, food delivery app development requires a combination of technical expertise, strong design principles, and a deep understanding of the food industry and user behavior to create a successful and engaging platform.

