"ONLINE FOOD DELIVERY"

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ABSTRACT

The purpose of this thesis is to build an online food ordering application named "FOODIE". Our research also includes the "satisfaction of consumers by using online food services". It will deal with consumer behaviour & helps to analyse their perceptions & will also help us to understand consumer equilibrium. Through these platforms, sharing one's experience with others has become so easy, in the form of reviews, be it regarding a product brought or any kind of service availed.

INDEX

CHAPTER 1

INTRODUCTION

With the rapid development of mobile technology, mobile application is connecting every field all together. Therefore, food industry is using this technology in connecting with vast public through online food ordering. Online food ordering may be a process that delivers food from local restaurants and other food co-operatives through a mobile application or an internet site. This type of food delivery is gaining popularity with more and more people especially the younger generation turning to mobile food ordering apps, thereby changing the way food is delivered and picked up [1]. Customers prefer using the food ordering app as they will generate an order without having to elucidate it to a special person and have the food delivered at his doorstep. Moreover, online payment makes this process easier and faster. Some popular online food ordering companies are "Swiggy", "Zomato".

The basic features that are needed by the customers in an application are making order, food review, order history, restaurant

profile, profile setting, order status, and track order.

CHAPTER 2
RELATED WORK

The journey of food delivery services came when the term 'Dabbawalas' was used to service where lunches were packed and sent through rail or bicycle to the working professionals in Mumbai, India. Then, with the development in technology and in the world of mobile phones and internet, the first food delivery service was given in 1995 by "World Wide waiter" (Waiter.com) in northern California where the restaurants had partnered with the services to take their offline menus in online world. Now, most of the countries have their own online food ordering applications which connect small restaurants to the consumers sitting at home and either they do not have the time or the transport to go to these restaurants. Also, some people just avoid going out to these crowded places and prefer eating at home. The past work present discussed the use of mobile application with internet of things, and cloud computing for different purposes which also includes food delivery. In this system, application focuses on targeted audience, and the users enter their data through login, then the data is processed, and the users utilize the facilities available .

These mobile applications are made by developers using different platforms, languages: Java, and SQL, for developing front end: Android Studio Development Kit, and back end: MySQL Server, Wamp Server . The food delivery platforms are reviewed by the consumers on the basis of star rating which depends on various factors like customer satisfaction, timely delivery, and the

customers intention to use it again in future . A study in compares the popularity of online food delivery apps- Zomato, Swiggy and uber eats based on the delivery services provided. It is not necessary that a particular application is popular worldwide, popularity changes with the location, and perception of the consumers. The paper concluded that Zomato is the most successful online food delivery platform in Ludhiana, India. E-payment is also an important factor deciding the user's preference of choosing a platform over many other platforms. The paper tells all the important factors that affect the adoption of food delivery apps. The paper also surveys about the age group, gender, and the marital status of the customers that prefer ordering food at home and concludes that around 59% of the people like eating at home rather than dining out. The paper builds a food ordering application for Tom Yum Thai Oy, a Thai restaurant in Vaasa.

CHAPTER 3

OBJECTIVE

The main objective of the paper is to provide an online food delivery app "FOODIE" which can serve the society with an added advantage by ordering from two or more places if in the same route or within 5-6 km range, and the customer can only register once using Aadhar verification and secure log-in, it makes the web portal safe for transactions. Also, to eliminate the wait time, the users can book a table at the restaurant of their choice with just a few taps.

The purpose of this invention is to provide profit in terms of Stakeholders [32], easy in terms of the app user, diverse options

for ordering food, improvising in Delivery mechanism to solve the hectic situation created by single place, single order criteria.

CHAPTER 4

TECHNOLOGY USED

In a food ordering mobile application different algorithm are used for different purposes. All the data related to the customers, meals, list of restaurants are processed using machine learning algorithms. With help of AI and machine learning: Gradient Boosting Decision Trees, the sequence in which the notification of the orders sent to the delivery person is improved. The decision tree algorithm and the random forest algorithms helps by classifying the restaurant into different groups based on the reviews obtained by the customers on the basis of the services provided [33]. Also, AI and ML helps connect the customers to the right restaurants without letting them roam around for the perfect meal and increase the efficiency of the food delivery operations. Therefore, AI & ML implementation can foster Real-time, micro-optimization of dynamic demand-supply, millions of times every day which can result in grow in online delivery business in order value by 200%. Some AI-driven kiosks apps use Facial recognition to give a personalised experience to customers, speeds up selection and ordering process and decreases wait time.

Machine learning is used in 3 main areas on the food delivery business:

1. Route planning for deliveries

2. Sales forecasts and amount to food to be prepared (avoid waste)

3. Product suggestion

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

•Sales forecasts ML applications goal is to reduce costs and inefficiencies in thesupply chain level. It uses as input sell-in and sell-out information, price, priceelasticity, market demand data proxies to generate production and stock quantitysuggestions to maximize sell-out while reducing cost and avoiding food waste.

•Product suggestion ML applications goal is, well, to suggest food that you might liketo order based on preferences, on-site navigation, previously ordered items and more.The final goal of these applications of course is to sell more.

CHAPTER 5

CUSTOMER SATISFACTION

With the covid-19 outbreak, lockdown restrictions do not allow people to enjoy dine- in services in the restaurants which affected the world's economy and restaurant sales [37][38] but online food delivery services provided non- contact delivery prepared food and thus enabled the food providers to keep operating. The online ordering of food has greatly influenced and changed the way of people's eating habits and preferences while ordering food online [39]. Every customer has their own preference, for some timely delivery is important, for others payment options or quality of food is important. The main factors influencing the consumers to order food online are: short delivery time, convenient, easy accessibility, very flexible, different mode of payments, and promotions/ offer.

PROPOSED SYSTEM

The app, FOODIE focuses only on delivery, so that the registered restaurants can promote their offers and meals without bothering the delivery of the orders as Foodie will not take any 'MINIMUM ORDER' tag on offer or meal as they are fulfilling the end consumers demand by delivering food from the local restaurants, whereas in apps like 'Food Panda' the restaurants decide 'minimum order amount' to order as they have to deliver the order to the end consumer by their own-selves or a customer has to go and pick up the food once it's prepared at the restaurant. The application charges a certain amount of fee from the restaurateurs to get their restaurants listed on the mobile app for promotion or new meals or new nearby options. When the user places an order, a notification is sent to the restaurateur, the nearest delivery person, and the platform owner. By collaborating at every stage with a powerful algorithm, all the three stakeholders: The Restaurant Owners, The Platform Owner, and The Delivery Professionals maintain the smooth functioning of the platform for the users. The app Foodie will not own any restaurant or chain of delivery services. It coordinates with the third party to plan supply for the demand that arises.

FEATURES

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

•No minimum order: The customer does not have to a minimum amount to order froma 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 nearbyrestaurants with pictures, reviews and map locations.

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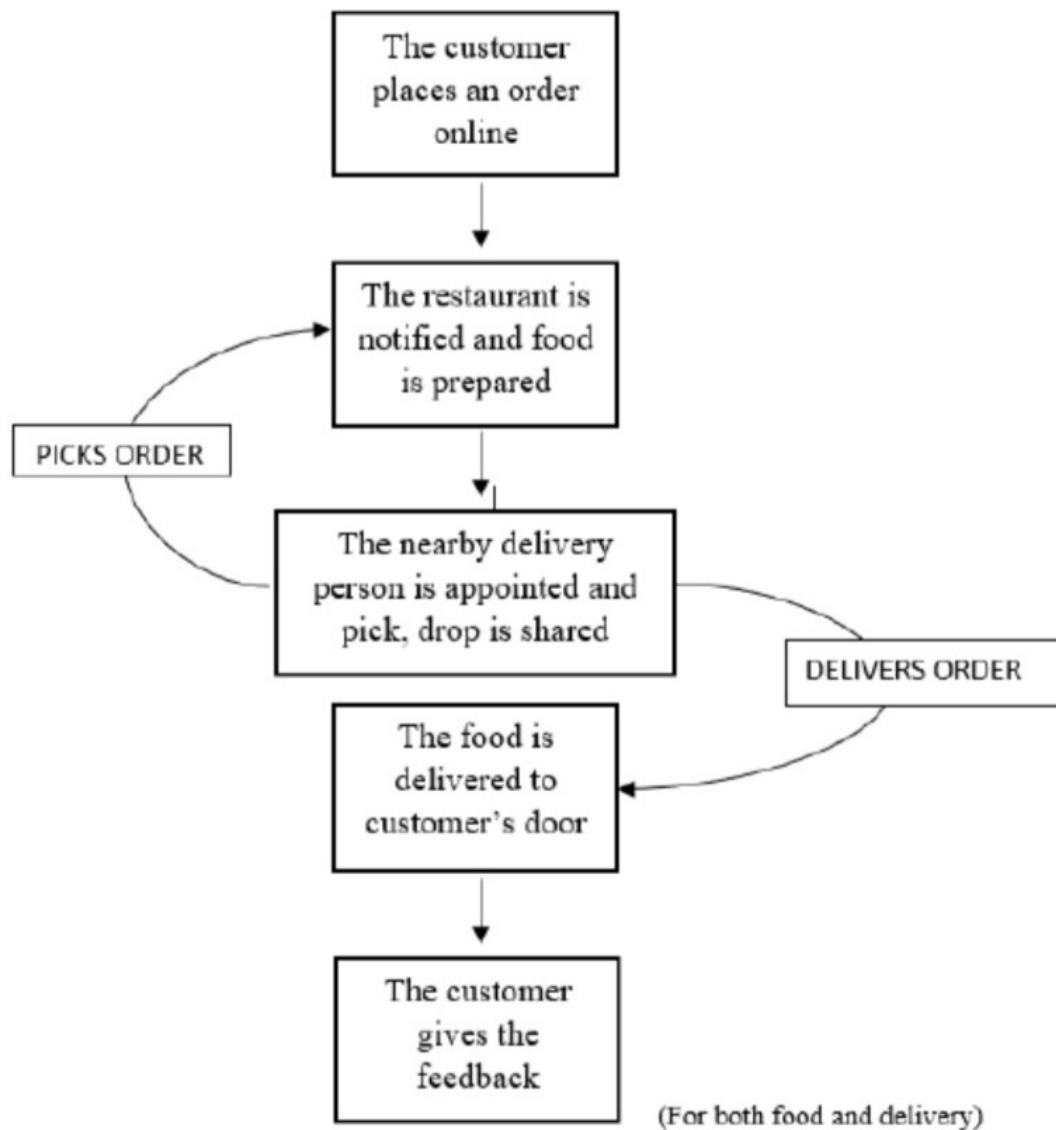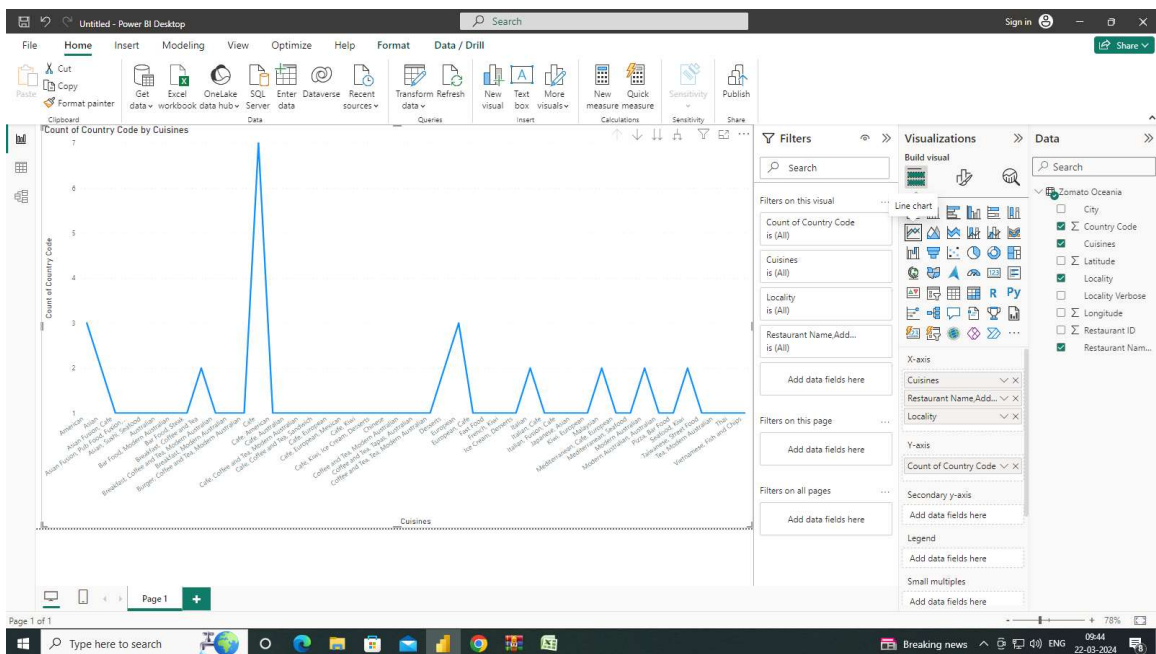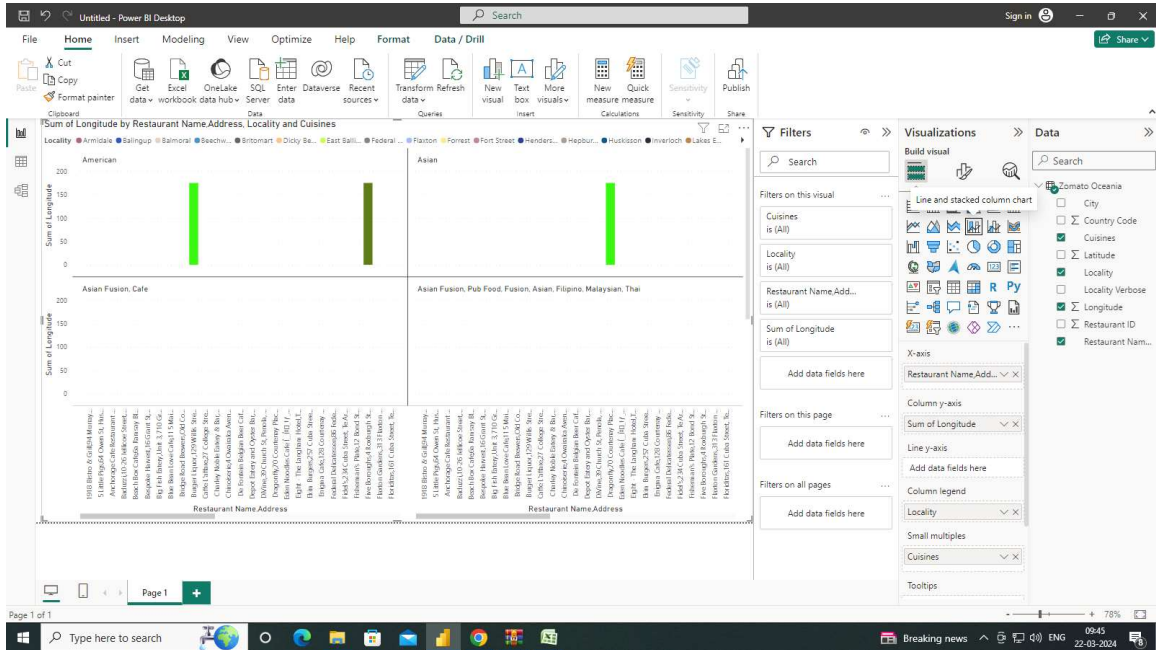
DIAGRAM

Figure 1. Working of food delivery apps

CHAPTER 6

DATA VISUALIZATION

CHAPTER 7
CONCLUSION

Online Food Ordering system is done to help and solve one of the important problems of customer.Because Large number of customercan use the internet and phone.Various issues related to Mess/Tiffin Service will be solved by these system. Thus, implementation of Online Food Ordering system is done to help and solve one of the important problems of customer. It helps customer in making order easily and gives information needed in making order to customer place. The Food website application made for restaurant massive one help to receiving orders.

REFERENCE
https://www.researchgate.net