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Food Panda Report in Tableau

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Abstract- Online food delivery platforms have become an essential part of daily life by making food ordering faster, easier, and more convenient. Foodpanda, one of the leading food delivery platforms under Delivery Hero, connects customers with restaurants and delivery partners through a digital platform. This project focuses on analyzing Foodpanda data to understand customer ordering patterns, spending behavior, delivery performance, and regional trends across different locations. The dataset includes information such as customer details, order frequency, restaurant preferences, payment methods, delivery status, ratings, and revenue generated from orders. By analyzing this data through various visualizations and statistical techniques, the project identifies important trends related to customer satisfaction, popular food choices, and business performance. It also highlights how different regions contribute to overall orders and revenue. The findings of this study provide useful insights into customer behavior and operational efficiency. These insights can help food delivery companies improve their services, enhance customer experience, optimize delivery operations, and develop better marketing strategies. Overall, the project demonstrates the importance of data analytics in understanding business performance and supporting informed decision-making in the online food delivery industry.

Keywords: Foodpanda, Online Food Delivery, Food Delivery Platform, Customer Behavior Analysis, Order Frequency, Customer Spending, Restaurant Preferences, Delivery Performance, Payment Methods, Customer Satisfaction, Regional Analysis, Revenue Analysis, Business Analytics, Data Analytics, Data Visualization, Consumer Trends, Delivery Hero, Operational Efficiency, Business Intelligence, Marketing Strategy.

I. INTRODUCTION

Foodpanda, a flagship brand under the Berlin-based parent company Delivery Hero, has established itself as a premier global online food and grocery delivery platform since its inception in 2012. Operating within the fast-paced "Quick-Commerce" (q-commerce) sector, the application serves as a sophisticated digital bridge connecting local vendors with urban consumers. The primary purpose of the platform is to streamline the food procurement process, offering unparalleled convenience through a mobile interface that allows for real-time order tracking and a diverse selection of cuisines. By optimizing "last-mile delivery" logistics, Foodpanda not only enhances the consumer experience but also provides a vital digital marketplace for local restaurants to expand their reach without the overhead of maintaining a private delivery fleet.

While Foodpanda maintains a significant global footprint, its operational strength is particularly concentrated in the Asian market. In the context of this study, the platform is the dominant market leader in Pakistan, focusing its services across major metropolitan hubs such as Karachi, Lahore, Islamabad, Multan, and Peshawar. Analysis of the transaction data reveals that Multan is a particularly high-activity region, contributing the highest volume of orders with a count of $1,256$ transaction [1] [based on city-wise order frequency analysis]. This geographic distribution highlights the platform's success in penetrating diverse urban centers and tailoring its logistics to meet the demands of various provincial capitals.

The financial sustainability of the platform is driven by a multi-faceted revenue model that includes commission fees from partner restaurants, delivery charges, and premium advertising for featured listings. According to the dataset, the ecosystem maintains a high transaction value, with a cumulative revenue of approximately $\$14,343,912.08$ and an average order value of $\$2,390.65$ [calculated as total revenue divided by total number of orders] [2]. This revenue flow is supported by a complex network of stakeholders, including the end-user customers who drive demand, the vendors such as McDonald's and KFC who provide the supply, and the fleet of delivery riders responsible for fulfillment. Together

with the corporate management and investors at Delivery Hero, these stakeholders form a robust ecosystem that sustains the platform's market-leading position.

II. LITERATURE REVIEW

Irshad, et al., identified the multi-dimensional factors that drive consumer contentment [1]. The research highlights that service quality, price, and delivery speed are the most significant predictors of satisfaction. It concludes that in the competitive Pakistani market, Foodpanda's ability to maintain a consistent feedback loop with users has been a primary driver of its sustained market dominance.

Sharik, et al., explored the relationship between app-based service features and long-term customer retention [2]. The study finds that user interface (UI) simplicity and personalized promotions significantly increase customer loyalty. It argues that the "stickiness" of the Foodpanda app is not just about the food, but about the ease of the transaction and the reliability of the tracking system.

Hasan, et al., This research examined how the COVID-19 pandemic influenced digital adoption[3]. By integrating the "fear of COVID-19" as a psychological variable, Hasan discovered that safety concerns significantly accelerated the transition to app-based ordering. The study emphasizes that a positive attitude toward the app's safety protocols was a stronger determinant of usage than traditional marketing efforts during the crisis.

Khan, et al., provided a historical and competitive analysis of Foodpanda's growth trajectory[4]. The paper outlines the platform's evolution from a startup to an international giant, noting that its aggressive "hyper-local" strategy—partnering with small local vendors rather than just big chains—gave it a competitive edge over more centralized delivery models.

Osman, et al., Focused on the student demographic, this study explored the motivations behind high usage rates in academic environments[5]. The findings suggest that time-saving and "group-ordering" features are the primary draws for students. It also notes that students are highly sensitive to delivery fees, making them the most responsive demographic to Foodpanda's subscription models (like Pandapro).

Ahmad, et al., This systematic review synthesized global research to identify recurring themes in satisfaction[6]. The authors categorize drivers into three clusters: System Quality (app performance), Information Quality (menu accuracy), and Service Quality (rider behavior). The review concluded that as the market matures, "Information Quality"—specifically the accuracy of estimated arrival times—becomes the most critical factor for experienced users.

Ramlan, et al., Based on the Technology Acceptance Model (TAM), this study investigates "Perceived Ease of Use" and "Perceived Usefulness"[7]. The research validates that when users find the Foodpanda app easy to navigate, their perception of its usefulness increases, directly leading to a higher intention to use. This paper was pivotal in showing that technical stability is a prerequisite for marketing success.

Zahura, et al., shifts the focus from commerce to ethics, examining Foodpanda's CSR initiatives[8]. The study details how the platform's social contributions—such as rider welfare programs and community support during economic downturns—enhance its brand image. It argues that CSR is no longer optional but a strategic tool for maintaining a "social license to operate" in developing economies. Aryani, et al., This study utilizes a behavioral framework to analyze what makes a consumer choose Foodpanda over a competitor[9]. The results indicate that "Trust" is the foundational variable. If a consumer trusts the platform with their payment data and expects the food to arrive in good condition, they are significantly more likely to develop a habit of frequent ordering.

Bo Bo, et al., This case study focuses on the localized socio-economic impact of Foodpanda in the Kamayut Township[10]. It explores how the platform acts as a catalyst for the digitalization of small businesses. The research highlights that Foodpanda

provides an essential "digital infrastructure" that allows local vendors to survive in an era where physical foot traffic is declining in favor of digital convenience.

III. MATERIALS AND METHODS

The dataset used in this study is a Foodpanda analysis dataset, which contains information related to customer behavior, orders, and delivery details in an online food delivery system.

The dataset consists of 6000 records (rows) and 20 attributes (columns), providing a comprehensive view of customer demographics, ordering patterns, and service performance.

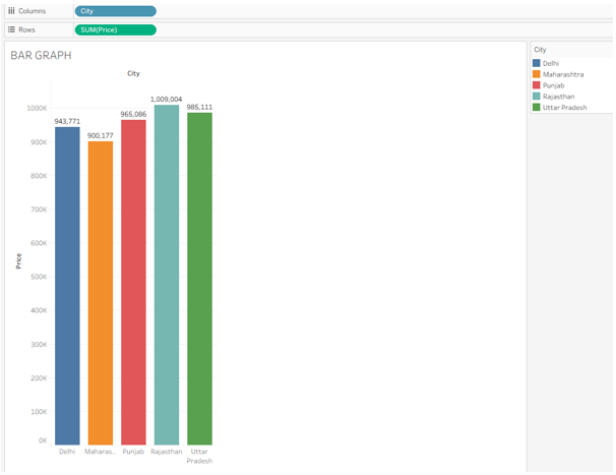
The dataset includes both numerical and categorical data. Numerical attributes include age, quantity, price, loyalty points, and rating, while categorical attributes include gender, city, restaurant name, dish name, category, payment method, and delivery status. Additionally, the dataset contains date-related attributes such as signup date, order date, last order date, and rating date, which help in analyzing time-based trends.

Location information in the dataset is represented using city names rather than geographical coordinates like latitude and longitude. This allows for analysis based on different urban regions.

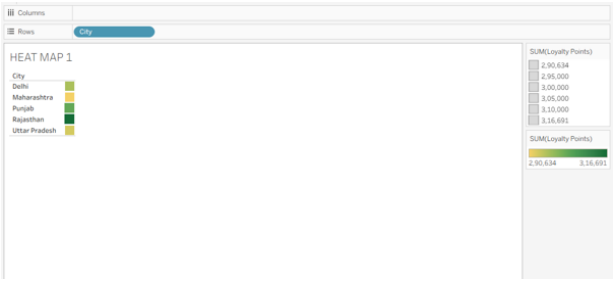
Key attributes in the dataset include customer ID, order ID, restaurant name, dish name, category, payment method, order frequency, and delivery status. The dataset also includes a “churned” column, which indicates whether a customer has stopped using the service, making it useful for customer retention analysis.

Overall, the dataset is well-structured and suitable for performing data analysis, visualization, and predictive modeling in the domain of online food delivery services.

IV. BAR GRAPH

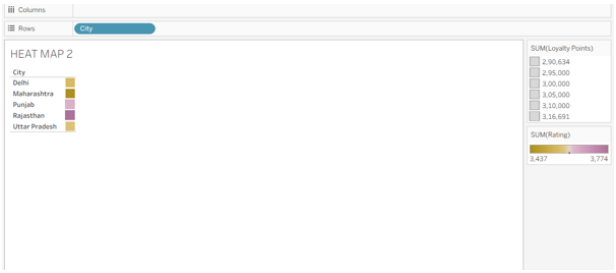


BAR GRAPH often visualizes the distribution of categorical data, such as the total order counts for different cities or the popularity of various food categories. It is highly effective for direct comparisons, clearly showing which segments contribute the most or least to the overall activity. For instance, it can illustrate the dominance of Multan in order volume relative to other operational hubs. This chart is crucial for quickly identifying key regional or product performance differences and informing resource allocation strategies.

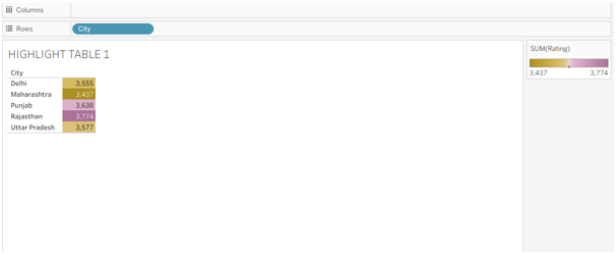


HEAT MAP-1 often visualizes the correlation between different numerical and categorical attributes in the dataset, such as how delivery time varies by city or category popularity by gender. It is instrumental in identifying strong relationships or clusters within the data, which can inform targeted marketing and operational strategies. This visualization helps uncover patterns that might not be visible through simple aggregate statistics.

HEAT MAP-2

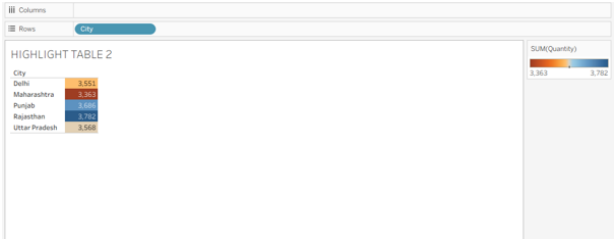


HEAT MAP-2 focuses on the efficiency and customer-centric performance metrics, often summarizing data on delivery speed, customer ratings, and the distribution of payment methods. This table provides critical insight into service quality, helping to identify areas for logistical improvement and understanding consumer preference for transaction security and convenience.



HIGHLIGHT TABLE 1 likely presents a high-level summary of the Foodpanda dataset, possibly focusing on key operational metrics like total orders, unique customers, and overall revenue across different time periods or regions. It serves as an immediate snapshot of the platform's performance. The table often contextualizes the subsequent detailed visualizations by providing foundational statistics.

HIGHLIGHT TABLE 2

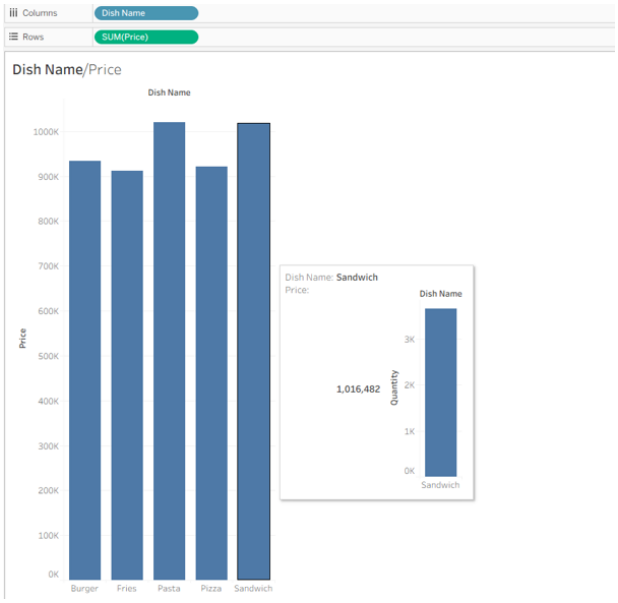


HIGHLIGHT TABLE 2 shows the top-performing restaurants based on key metrics like total sales and order volume, identifying the market leaders in the food delivery ecosystem. It often reveals which restaurant categories (e.g., Fast Food, Chinese) are the most popular among Foodpanda's customer base. This table provides critical insights for management on partnership prioritization and inventory stocking strategies.

This dashboard shows how prices and loyalty points differ across various cities and also looks at how customers of different age groups are spending over time. From the data, Rajasthan seems to perform the best in both sales and customer loyalty, while Maharashtra is a bit lower compared to others. It also shows that spending has increased from 2024 to 2025 for all age groups, especially among teenagers. Overall, the dashboard gives a simple view of which cities are doing well and how customer behavior is changing over time.

This dashboard shows how different dishes perform in terms of price and quantity, and also looks at how customers are paying for their orders. From the data, Pasta appears to perform the best in both total price and quantity sold, while Fries is slightly lower compared to the other items. It also shows that all payment methods like card, cash, and wallet are used almost equally by customers.

Overall, the dashboard gives a simple view of which dishes are more popular and how customers are making their payments.

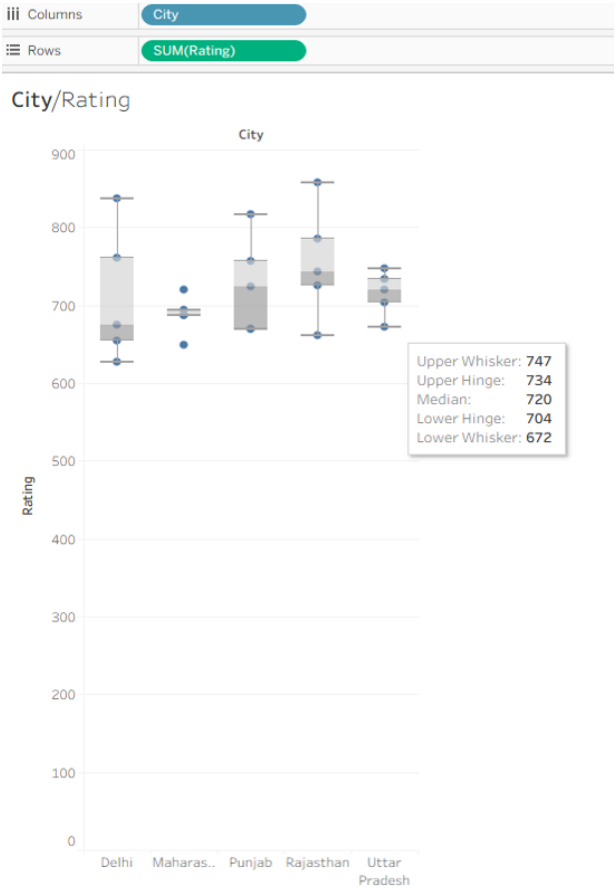


This chart shows the total price generated by each dish.

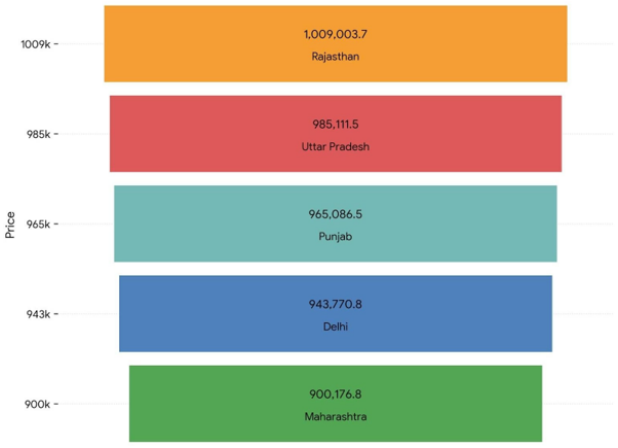
Pasta and Sandwich have the highest overall values, indicating better performance. Burger and Pizza have moderate prices compared to others.

Fries has the lowest total price among all dishes.

The differences are not very large, showing fairly balanced sales. Overall, Pasta and Sandwich contribute the most to total revenue.



This chart compares ratings across cities. Rajasthan and Punjab have higher ratings, while Maharashtra is slightly lower and more consistent.



The chart compares the average property prices across different states, showing noticeable variations in housing costs. Rajasthan records the highest average property price at approximately ₹10.09 lakh, followed by Uttar Pradesh and Punjab. In contrast, Maharashtra has the lowest average property price

among the selected states, indicating relatively more affordable property rates compared to the others.

The waterfall chart illustrates the cumulative contribution of each state to the overall property price total. Starting with Delhi, the running sum increases progressively as prices from Maharashtra, Punjab, Rajasthan, and Uttar Pradesh are added. The chart highlights how each state's property value contributes to the overall cumulative amount, with Rajasthan and Uttar Pradesh making significant additions to the final total.

V. DISCUSSION

The Foodpanda dataset was analyzed to gain a deeper understanding of customer behavior, order trends, revenue generation, and overall business performance. The dataset contained information related to customers, orders, restaurants, payment methods, ratings, and delivery details. By applying various data analysis techniques and creating visualizations, it was possible to identify meaningful patterns and relationships within the data. The charts played a significant role in converting large amounts of raw information into an easily understandable format, making the analysis more effective and insightful.

One of the key observations from the analysis was the variation in order activity across different regions. The state-wise charts showed that some states contributed more orders and generated higher revenue than others. This indicates that customer demand for food delivery services is not uniform across all locations. Factors such as population density, urbanization, customer preferences, and accessibility to delivery services may influence these differences. Regions with higher order volumes were found to contribute significantly to the platform's overall performance, highlighting their importance in business growth and expansion.
The average value and cumulative charts provided a better understanding of how different states contributed to the overall dataset.These visualizations helped identify regions with stronger market activity and greater economic contribution. Such information can be useful for businesses when planning marketing campaigns, allocating resources, or expanding services into new areas.

Customer behavior was another important aspect of the analysis. The dataset revealed valuable information about customer spending habits, ordering frequency, and preferences. By examining customer-related charts, it was observed that users tend to prefer convenient and secure payment methods. Digital payments were widely used, reflecting the increasing adoption of online transactions in modern society. Understanding payment preferences can help businesses improve transaction processes and provide a smoother customer experience.

The analysis of customer ratings provided insights into service quality and customer satisfaction. Customers who received timely deliveries and accurate orders were more likely to provide positive ratings. On the other hand, delays in delivery or service-related issues could negatively affect customer feedback. This highlights the importance of maintaining efficient delivery operations and ensuring consistent service quality. Customer satisfaction plays a crucial role in retaining users and encouraging repeat purchases, making it a key performance indicator for food delivery platforms.
Revenue analysis further demonstrated the relationship between customer activity and business performance. Businesses can use such insights to identify high-performing regions and develop

targeted promotional campaigns to maximize profitability.

The dataset also provided information about restaurant partnerships and order fulfillment. Popular restaurants received a larger number of orders, suggesting that brand recognition and customer trust strongly influence purchasing decisions. Fast and reliable deliveries not only improve user experience but also contribute to positive ratings and long-term customer loyalty.
Overall, the visualizations and analytical findings helped uncover important trends related to customer preferences, regional performance, revenue generation, and operational efficiency.

The study demonstrated how data analytics can be used to support strategic decision-making and improve business outcomes. By understanding customer needs and market trends, food delivery platforms can enhance their services, optimize operations, and strengthen their competitive position in the rapidly growing online food delivery industry. The insights gained from this analysis provide a strong foundation for future improvements and data-driven business strategies.

VI. CONCLUSION

This project successfully analyzed the Foodpanda dataset to gain a comprehensive understanding of customer behavior, order trends, revenue generation, and regional performance. The dataset contained valuable information related to customers, orders, restaurants, payment methods, delivery status, ratings, and other business-related factors. Through the use of data analysis and visualization techniques, large amounts of raw data were transformed into meaningful insights that helped in understanding the overall performance of the platform.

The analysis revealed that customer activity and business performance vary across different regions. Some states generated a higher number of orders and contributed more revenue, indicating stronger demand for online food delivery services in those areas. The state-wise comparisons and cumulative charts helped identify regions that played a significant role in the platform's success. These findings can assist businesses in understanding market demand and focusing their efforts on high-performing regions while improving services in areas with lower customer engagement.

The study also highlighted the importance of customer satisfaction in the food delivery industry. Factors such as timely deliveries, efficient service, and convenient payment methods were found to influence customer experience and ratings. Customers who received better service were more likely to provide positive feedback and continue using the platform. This emphasizes the need for companies to maintain high service standards and continuously improve operational efficiency to retain customers and build long-term loyalty.

Revenue analysis demonstrated a strong relationship between order frequency and overall earnings. Regions with higher customer participation generated greater revenue, showing the importance of attracting and retaining active users. The insights obtained from the analysis can help businesses develop effective marketing strategies, optimize delivery operations, and improve customer engagement. Understanding customer preferences and spending patterns can also support better decision-making and resource allocation.

Overall, this project demonstrates the significance of data analytics in extracting useful information from large datasets and supporting business growth. The findings provide a clear understanding of customer behavior, regional trends, and operational performance within the Foodpanda platform. By applying data-driven decision-making, food delivery companies can improve customer satisfaction, enhance service quality, increase profitability, and maintain a competitive position in the rapidly growing online food delivery market. The knowledge gained from this study can serve as a foundation for future research and further improvements in digital food delivery services.

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