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

abstract for a 360-degree business analysis of online delivery apps using Power BI could be structured as follows:Title: A Comprehensive Analysis of Online Delivery Apps Using Power BI: Unveiling Insights for Business GrowthAbstract: This study employs Power BI to conduct a thorough 360-degree analysis of the online delivery app market, aiming to provide actionable insights for businesses operating in this dynamic sector. Leveraging datasets from multiple sources, including user demographics, order histories, geographical data, and market trends, our analysis delves into various aspects crucial for understanding and optimizing business performance.

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CHAPTER 1

INTRODUCTION

1.1 Problem Statement

Complex Data Ecosystem: The online delivery app ecosystem generates vast amounts of data from various sources, including user interactions, order fulfillment, delivery logistics, and market trends. Analyzing this data effectively to extract actionable insights poses a significant challenge.Lack of Comprehensive Analysis: Many stakeholders lack a holistic understanding of their business performance across multiple dimensions, such as user demographics, geographic regions, product preferences, and competitor landscape. Without comprehensive analysis, decision-makers struggle to identify areas for improvement and strategic opportunities.Data Silos and Fragmentation: Data fragmentation and siloed systems hinder the integration and analysis of disparate datasets. Without a unified view of their data, stakeholders cannot leverage the full potential of analytics tools to drive informed decision-making and optimize their operations.Dynamic Market Landscape: The online delivery market is highly dynamic, characterized by evolving consumer preferences, changing regulatory landscapes, and intense competition. Stakeholders require timely and accurate insights to adapt their strategies and stay ahead in this competitive landscape.Addressing these challenges requires a robust data analytics solution that can integrate diverse datasets, provide comprehensive insights, and empower stakeholders to make data-driven decisions. By leveraging Power BI's capabilities for data visualization, analysis, and reporting, this study aims to address these challenges and provide actionable recommendations for optimizing business operations and sustaining competitive advantage in the online delivery app industry.

1.2 Proposed Solution

Data Integration and Cleansing: The first step is to integrate data from various sources within the online delivery app ecosystem, including user databases, order management systems, delivery tracking platforms, and market research datasets. This involves cleansing the data to ensure accuracy, consistency, and completeness, thus laying the foundation for reliable analysis.Dashboard Development with Power BI: Leveraging the capabilities of Power BI, comprehensive dashboards will be developed to visualize key performance indicators (KPIs) and trends across different dimensions of the business. These dashboards will provide stakeholders with intuitive and interactive interfaces to explore data, identify patterns, and gain insights into user behavior, market dynamics, and operational performance.Advanced Analytics and Predictive Modeling: In addition to descriptive analytics, advanced analytics techniques such as predictive modeling and machine learning will be employed to forecast future trends, identify potential opportunities, and mitigate risks. By analyzing historical data and external factors influencing the online delivery market, stakeholders can make informed decisions and formulate effective strategies.Actionable Insights and Recommendations: The analysis will culminate in the generation of actionable insights and recommendations tailored to the specific needs and objectives of stakeholders. These recommendations may include strategies for optimizing delivery routes, improving user engagement, enhancing product offerings, and responding to competitive threats.Iterative Improvement and Optimization: The proposed solution is not a one-time endeavor but an ongoing process of iterative improvement and optimization. By continuously monitoring performance metrics, refining analytical models, and incorporating feedback from stakeholders, the solution will evolve to address emerging challenges and opportunities in the dynamic online delivery app landscape.Overall, the proposed solution aims to empower stakeholders with a comprehensive understanding of their business operations, actionable insights derived from data-driven analysis, and the tools needed to drive continuous improvement and innovation in the online delivery app industry.

1.3 Feature

- Data Integration:Integrating diverse datasets from various sources within the online delivery app ecosystem, including user databases, order management systems, and market research data.
- Data Cleansing and Preparation:Cleaning and preparing the integrated data to ensure accuracy, consistency, and completeness for reliable analysis.
- Dashboard Development:Creating interactive dashboards using Power BI to visualize key performance indicators (KPIs) and trends across different dimensions of the business.

1.4 Advantages

- Comprehensive Insights: The solution provides stakeholders with comprehensive insights into various aspects of their business operations, including user behavior, market trends, and operational performance, enabling informed decision-making.
- Actionable Recommendations: By leveraging advanced analytics techniques, the solution generates actionable recommendations tailored to the specific needs and objectives of stakeholders, helping them optimize their strategies and operations.
- Enhanced Efficiency: With interactive dashboards and customizable reports, stakeholders can quickly access relevant information and gain insights into key performance indicators, leading to enhanced operational efficiency and productivity.

1.5 Scope

Data Integration and Cleansing:Integrating data from various sources within the online delivery app ecosystem, including user databases, order management systems, delivery tracking platforms, and market research datasets.Cleansing and preparing the integrated data to ensure accuracy, consistency, and completeness for reliable analysis.Dashboard Development and Visualization:Creating interactive dashboards using Power BI to visualize key performance indicators (KPIs) and trends across different dimensions of the business, such as user demographics, geographic regions, product preferences, and competitor landscape.Developing customizable reports to provide stakeholders with detailed insights into user behavior, market dynamics, and operational performance.

CHAPTER 2

SERVICES AND TOOLS REQUIRED

2.1 Services Used

- Power BI Desktop: This desktop application allows users to connect to various data sources, transform and cleanse data, create data models, and design interactive visualizations and reports.
- Power BI Service: The cloud-based service provided by Power BI allows users to publish, share, and collaborate on reports and dashboards securely over the web. It also enables real-time data monitoring, automated data refresh, and integration with other Microsoft services.

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.

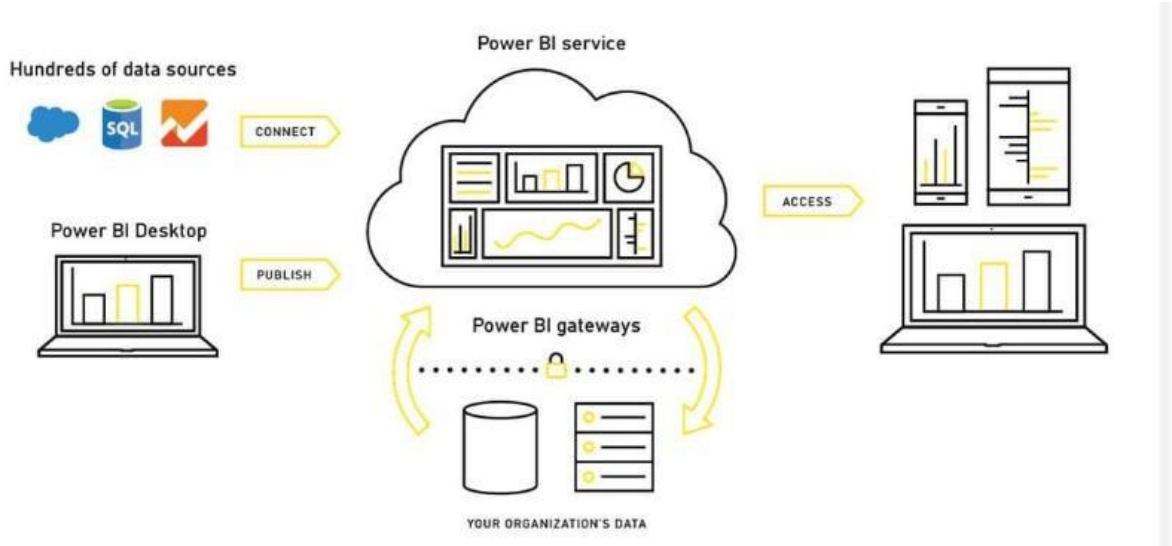
Software Requirements:

- **Power BI Desktop:Power BI Desktop is essential for creating data models, designing visualizations, and building interactive reports and dashboards. It is available as a free download from the Microsoft website.**
- **Power BI Service:The cloud-based Power BI Service is required for publishing, sharing, and collaborating on reports and dashboards securely over the web. Access to Power BI Service is available through subscription plans offered by Microsoft.**

CHAPTER 3

PROJECT ARCHITECTURE

3.1 Architecture



Here's a high-level architecture for the project:

- Data Sources:Various data sources contribute to the analysis, including user databases, order management systems, delivery tracking platforms, market research datasets, and potentially external APIs. These sources provide raw data that is essential for understanding user behavior, market trends, and operational performance.

- Data Integration and ETL Processes:Data integration and ETL (Extract, Transform, Load) processes are performed to consolidate and cleanse data from diverse sources. Tools such as SQL Server Integration Services (SSIS) or Azure Data Factory may be utilized for this purpose. These processes ensure that the data is accurate, consistent, and in a format suitable for analysis.
- Data Storage:The integrated and cleansed data is stored in a centralized data repository, which could be a relational database (e.g., Azure SQL Database) or a data lake (e.g., Azure Data Lake Storage). This centralization facilitates efficient data access and management for subsequent analysis

Overall, this architecture enables stakeholders in the online delivery app industry to gain actionable insights from their data, make informed decisions, and optimize their operations to meet customer demands and stay competitive in the market.

CHAPTER 4

MODELING AND RESULT

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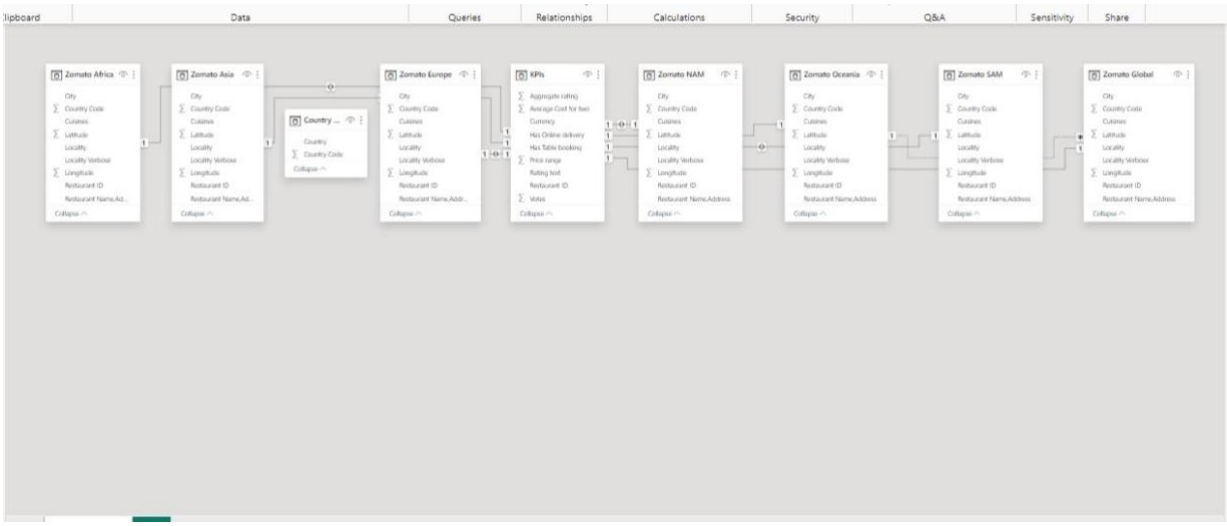
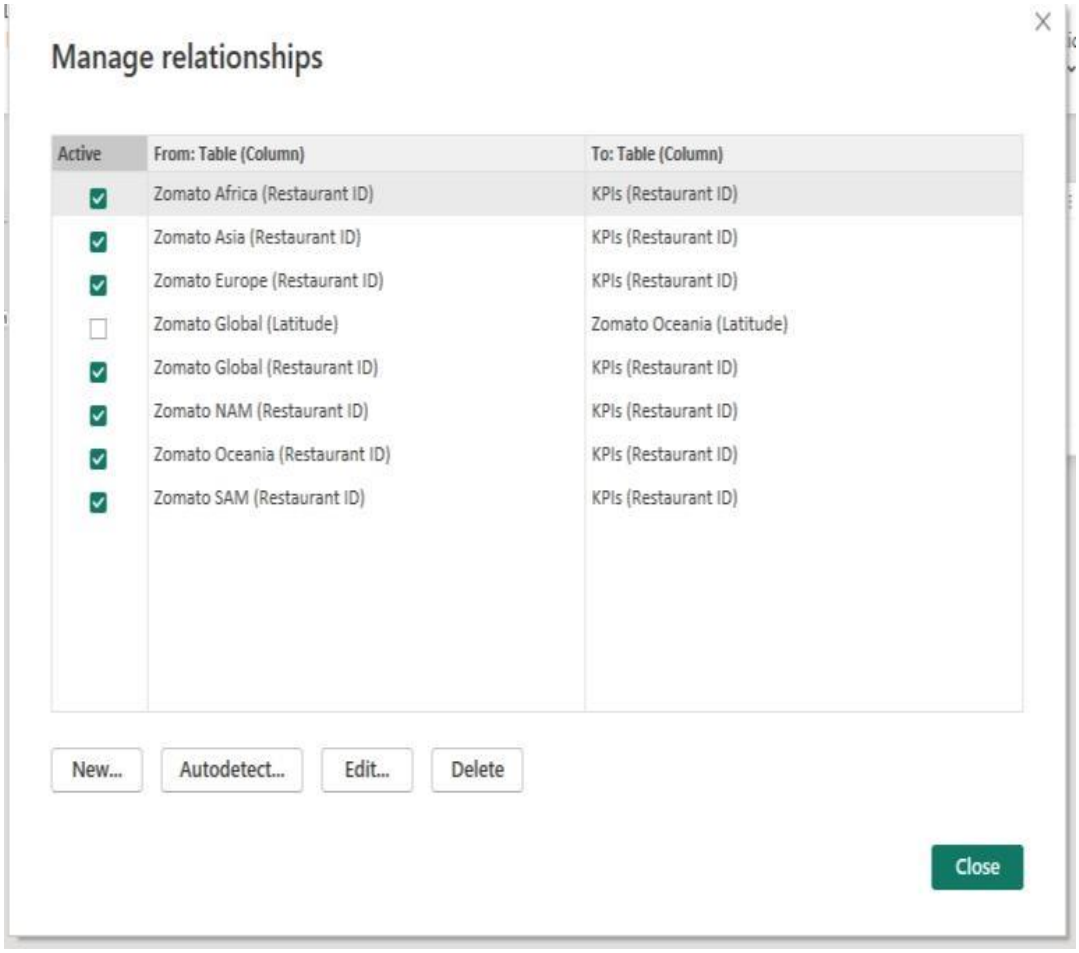
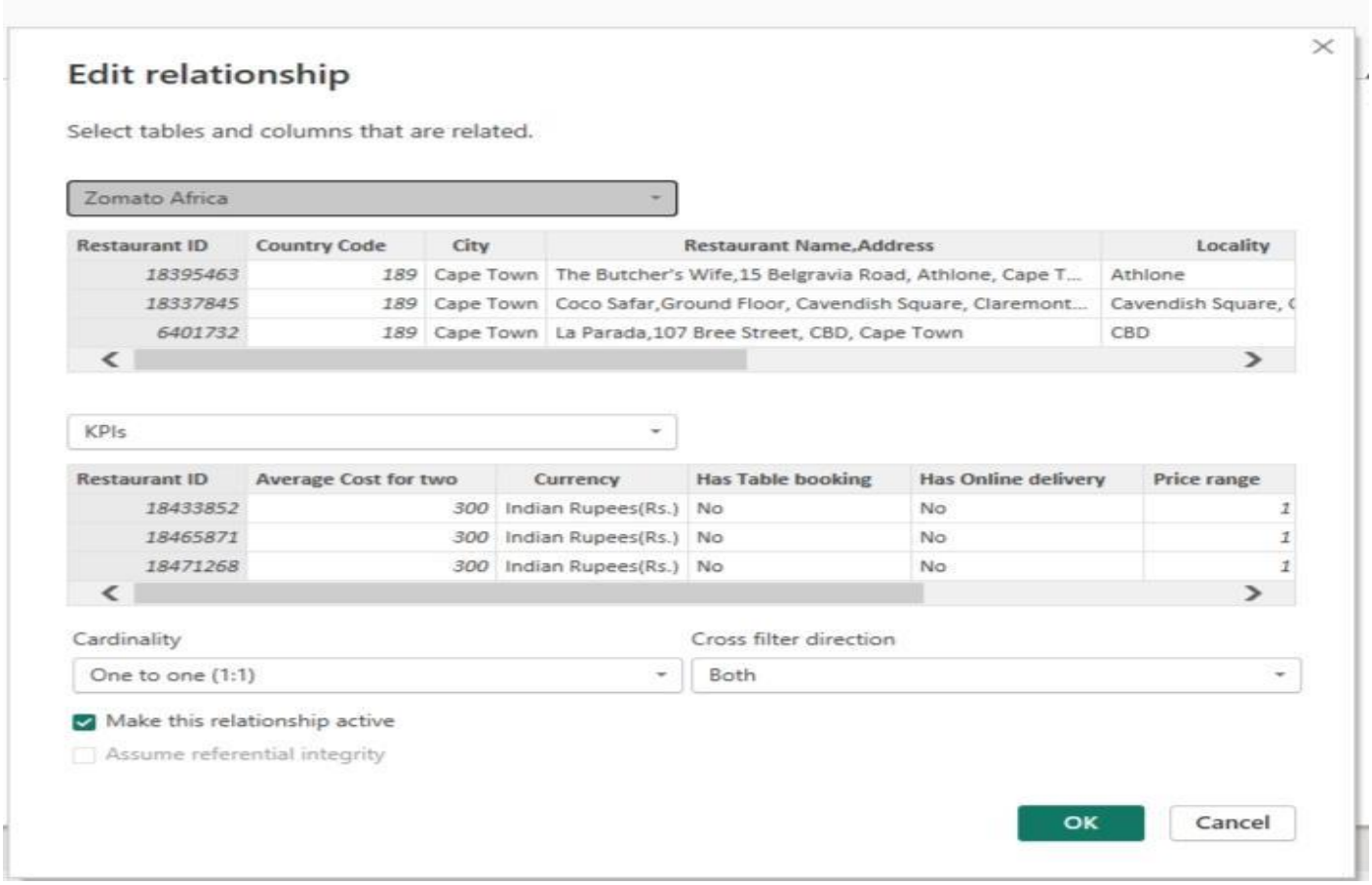
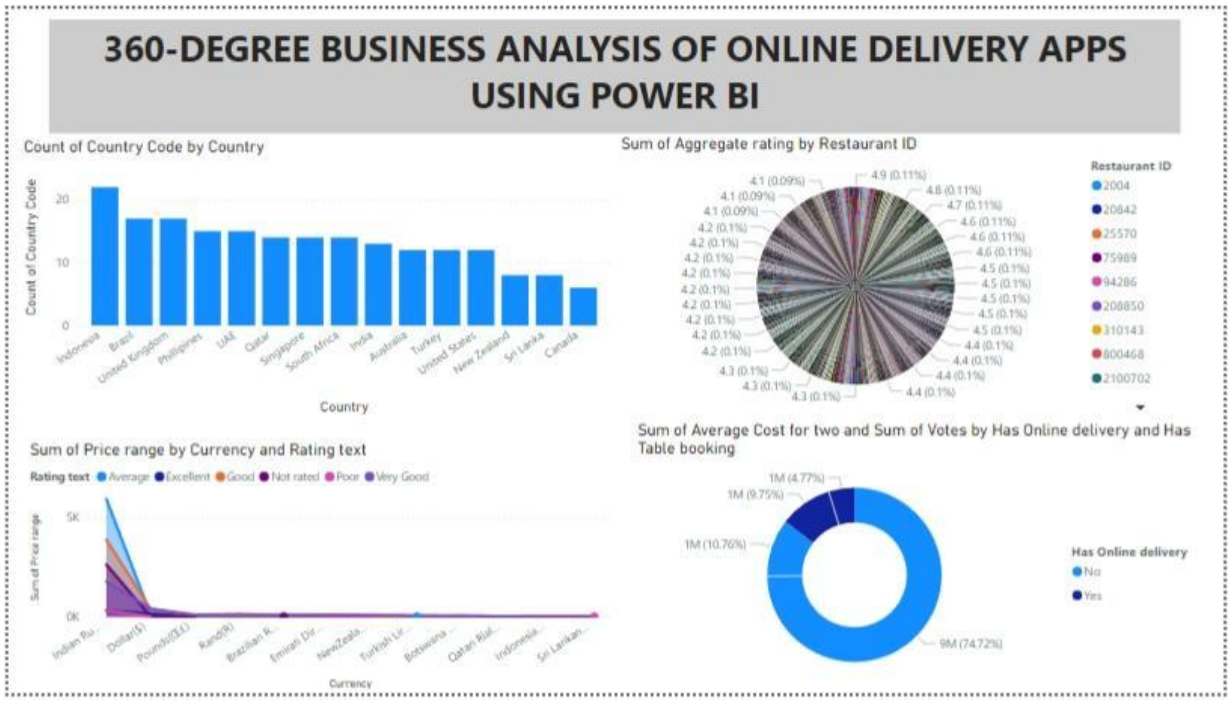
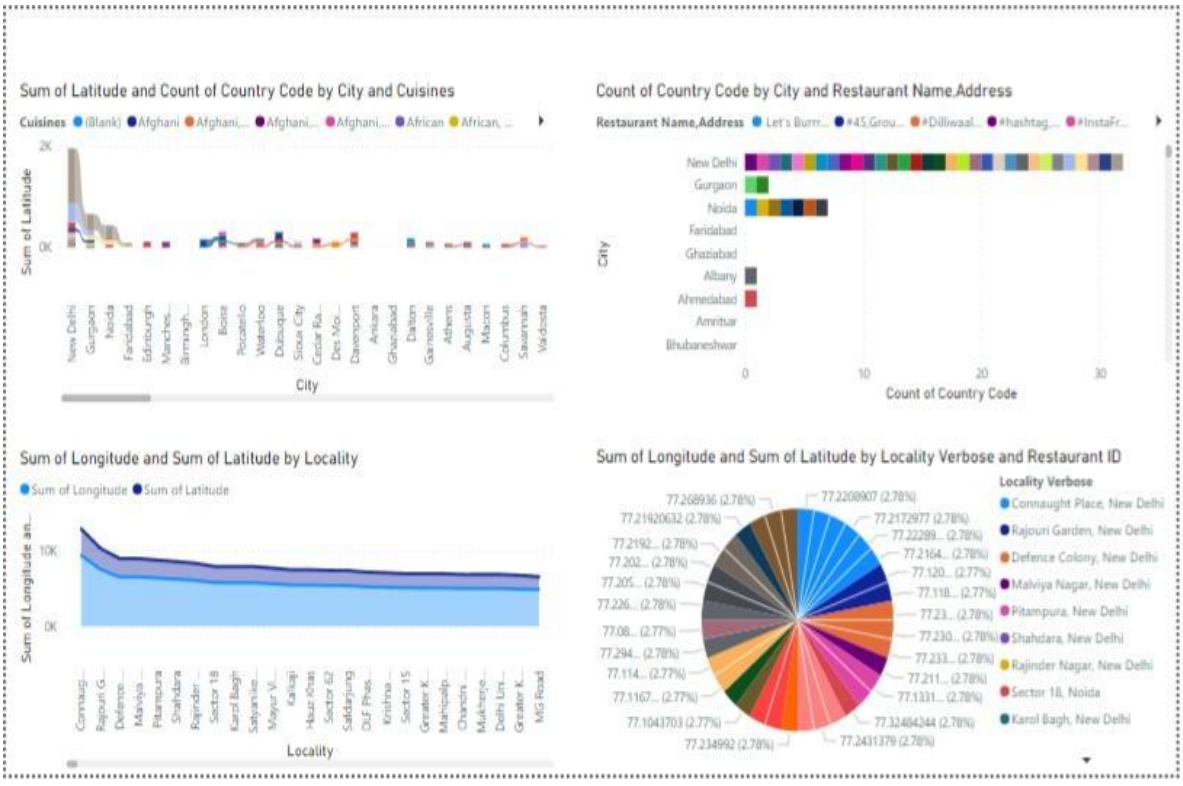






Dashboard





CONCLUSION

In conclusion, the proposed solution for conducting a 360-degree business analysis of online delivery apps using Power BI offers a comprehensive approach to leveraging data for informed decision-making and strategic optimization. By integrating diverse datasets, analyzing key performance indicators, and visualizing insights through interactive dashboards and reports, stakeholders in the online delivery ecosystem can gain valuable insights into user behavior, market trends, and operational performance.Through the use of advanced analytics techniques such as predictive modeling and machine learning, the solution enables stakeholders to forecast future trends, identify opportunities for improvement, and mitigate risks proactively

FUTURE SCOPE

Advanced Analytics Capabilities:Further leveraging advanced analytics techniques such as natural language processing (NLP), sentiment analysis, and anomaly detection to extract deeper insights from unstructured data sources such as customer reviews and social media.Integration with IoT Devices:Integrating data from Internet of Things (IoT) devices such as delivery drones, smart vehicles, and wearable devices to capture real-time data on delivery routes, vehicle performance, and driver behavior for improved operational efficiency and safety.Predictive Maintenance:Expanding predictive maintenance models to anticipate equipment failures, optimize maintenance schedules, and minimize downtime not only for delivery vehicles but also for other critical infrastructure components such as warehouses and distribution centers.

REFERENCES

https://medium.com/analytics-vidhya/analysis-of-bank-customers-using-dashboard-in-power-bi-a366f2b3e563

LINK

https://github.com/githubtraining/hellogitworld.git

