Report On

Swiggy Data Analysis

Submitted in partial fulfillment of the requirements of the Course project in
Semester VII of fourth year Artificial Intelligence and Data Science

by
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CERTIFICATE

This is to certify that the project entitled "Swiggy Data Analysis" is a bonafide work of "Rajat Gupta(Roll No. 20), Vedant Mahadik(Roll No. 26), Hitesh Moota(Roll No. 32)" submitted to the University of Mumbai in partial fulfillment of the requirement for the Course project in Semester VII of fourth year Artificial Intelligence and Data Science engineering.

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Chapter 1: Abstract

This project focuses on analyzing data from Swiggy, an online food delivery platform in India. The study aims to uncover patterns in consumer behavior, restaurant performance, and order trends. By examining Swiggy's historical data, we can extract valuable insights, including peak order times, popular cuisines, customer retention rates, and delivery time performance. These insights are crucial for improving both customer experience and operational efficiency. The analysis also sheds light on geographical trends, helping Swiggy optimize resource allocation and streamline delivery networks. The ultimate goal is to provide actionable recommendations for Swiggy and its restaurant partners, improving decision-making and customer satisfaction

Chapter 2: Introduction

2.1 Introduction

Swiggy, launched in 2014, has revolutionized food delivery in India, bridging the gap between customers and their favorite restaurants. With a rapidly expanding customer base and an ever-growing restaurant network, Swiggy's ability to handle massive volumes of data is crucial to maintaining its competitive edge. This project analyzes Swiggy's data to provide insights into customer preferences, order trends, delivery performance, and restaurant ratings. Understanding these patterns will allow Swiggy to improve service quality, expand strategically, and enhance the overall customer experience.

2.2 Problem Statement

As competition intensifies in the food delivery industry, Swiggy faces challenges such as ensuring timely deliveries, maintaining high levels of customer satisfaction, and optimizing its delivery network. Delays, inconsistent restaurant performance, and evolving consumer preferences are factors that require careful analysis and optimization. This project addresses these challenges by analyzing Swiggy's operational data, extracting patterns, and offering insights that will help the company make informed decisions to improve its services.

2.3 Objectives

- **Order Trend Analysis:** Analyze order volumes across different times of the day, week, and seasons to identify peak hours and optimal delivery windows.
- **Restaurant Performance Analysis:** Evaluate the impact of factors like preparation time, order accuracy, and customer reviews on restaurant performance.
- **Customer Preferences:** Understand which cuisines, meal types, and restaurants are most popular across various regions.
- **Delivery Efficiency:** Examine delivery times, rider efficiency, and delay factors to propose optimizations for faster, more reliable deliveries.
- **Geographical Insights:** Identify regional patterns in customer behavior and preferences to support Swiggy's expansion strategy.

Chapter 3: Proposed System

3.1 Introduction

The proposed Swiggy Data Analysis system is designed to utilize data-driven techniques to enhance Swiggy's service offerings. Through exploratory data analysis (EDA) and advanced analytics, the system will extract meaningful insights from Swiggy's vast datasets, focusing on customer behavior, delivery network efficiency, and restaurant performance. Using various machine learning models, the system will also predict customer retention and suggest improvements in operational workflows.
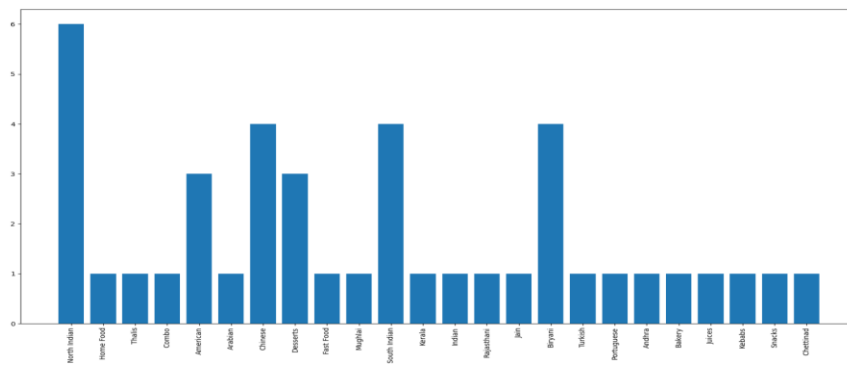
3.2 Details of Hardware and Software

- Python
- Google colab notebook
- Kaggle
- Microsoft excel

3.3 Results
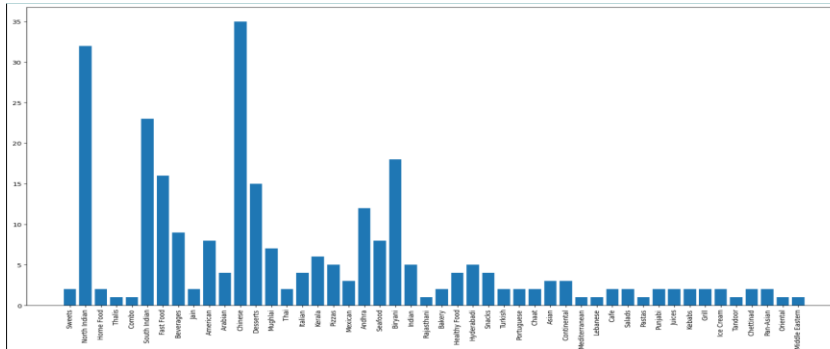
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3.4 Conclusion

This project highlights the importance of data analysis in driving operational improvements for a company like Swiggy. By leveraging customer order data, restaurant ratings, and delivery metrics, the project identified several actionable insights that can enhance Swiggy's delivery network, improve restaurant collaboration, and increase overall customer satisfaction. Future extensions of this project may include predictive modeling to forecast demand spikes and advanced machine learning algorithms to recommend personalized food choices for customers.

References

[1] Sharma, R., & Verma, P. (2021). Consumer Behavior Analysis in Food Delivery Services: A Study on Swiggy and Zomato in India. Journal of Business and Retail Management Research, 16(1), 35-50.

[2] Kumar, A., & Reddy, S. (2020). Data-Driven Strategies in Online Food Delivery Platforms: Insights from Swiggy's Operations. International Journal of Business Analytics, 7(3), 75-89.

[3] Mishra, K., & Singh, P. (2021). Analyzing Delivery Time Efficiency in Online Food Delivery: A Case Study of Swiggy in Urban India. Journal of Operations and Supply Chain Management, 14(2), 120-135.

[4] Gupta, M., & Malhotra, D. (2022). Exploring Customer Satisfaction and Retention in the Indian Food Delivery Market: A Comparative Study of Swiggy and Zomato. International Journal of Customer Relationship Marketing and Management, 13(2), 89-105.