INFOSYS INTERNSHIP PROJECT REPORT

FoodTrends: Understanding Customer Preferences in Food & Beverages

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1. ABSTRACT

The project FoodTrends*: Understanding Customer Preferences in Food & Beverages* aims to analyze and visualize customer preferences, satisfaction levels, and behavior patterns in the online food delivery industry. The growing influence of technology and convenience-driven lifestyles has changed how customers order and experience food. Understanding these changes requires the effective use of data analytics tools like Microsoft Power BI, which helps convert raw data into valuable business insights.

This project consists of five key dashboards: **Demographic Overview**, **Food and Meal Preferences**, **Quality and Satisfaction Metrics**, **Delivery Experience**, and **Payment and Offer Insights**. Each dashboard plays a crucial role in uncovering specific insights about customers' eating habits, purchasing patterns, and service feedback.

The study identifies **freshness, delivery time, politeness of service staff, and digital payment convenience** as major drivers of customer satisfaction. Furthermore, the findings reveal that promotional offers significantly improve engagement and repeat purchases.

The objective of this project was not only to analyze trends but also to develop the ability to use data visualization tools effectively. Power BI's interactive features allowed the creation of dynamic visuals that support business decisions in real-time. Overall, this project contributes to understanding how analytics can be integrated into the food industry to improve operations, customer satisfaction, and long-term growth strategies.

2. INTRODUCTION

The food and beverage industry has undergone a dramatic transformation over the past decade, largely due to the expansion of digital platforms and delivery applications. Today, customers expect quick, reliable, and personalized service. As competition grows, businesses that can analyze and act on customer feedback gain a strategic advantage.

This project was conducted under the **Infosys Springboard Internship**, designed to provide hands-on experience in applying data analytics concepts to real-world datasets. The focus was to use Power BI to identify patterns that influence customer satisfaction. The study aimed to explore correlations between **demographic factors, meal preferences, payment methods, and service ratings.**

Power BI was selected for its powerful data modeling capabilities, user-friendly interface, and ability to integrate diverse data sources. By leveraging Power Query for cleaning and DAX expressions for calculations, the project achieved data accuracy and visualization depth.

In a fast-paced environment where decisions rely heavily on data, this project bridges theoretical learning with practical business applications. The insights derived here can be used by restaurants, online platforms, and marketing teams to enhance customer experiences, optimize delivery performance, and design loyalty-driven strategies.

3. OBJECTIVES

The main objectives of this project were both analytical and practical. Each objective was designed to focus on a specific dimension of customer experience:

1. To **analyze demographic factors** such as gender, age, occupation, and income to understand the nature of the customer base.
2. To **identify meal preferences** among various groups and determine how lifestyle and work routines influence choices.
3. To **evaluate satisfaction parameters**, including freshness, delivery time, packaging, and politeness of service providers.
4. To **explore payment patterns** and examine how offers and discounts affect customer behavior.
5. To **visualize results interactively** through Power BI dashboards that communicate insights clearly and effectively.
6. To **develop hands-on expertise** in Power BI tools such as Power Query, DAX, and visualization design.
7. To **bridge the gap between data analytics and real-world business decisions** by providing actionable insights for the food industry.

By fulfilling these objectives, the project supports data-driven decision-making that enhances operational efficiency and customer satisfaction.

4. TOOLS AND METHODOLOGY

This project followed a structured and step-by-step methodology to ensure accurate and consistent results.

Tools Used:

- **Microsoft Power BI Desktop:** Used for creating interactive dashboards.
- **Power Query Editor:** For cleaning and transforming raw data.
- **DAX (Data Analysis Expressions):** For building calculated measures and KPIs.
- **Microsoft Excel:** For initial preprocessing and verification of data.

Methodology Followed:

1. **Data Collection:** A survey dataset containing demographic, meal preference, and satisfaction data was used.
2. **Data Cleaning:** Power Query handled inconsistencies, missing values, and standardization.
3. **Data Modeling:** Logical relationships between tables were built to ensure proper filtering and interactivity.
4. **Visualization:** Multiple chart types—bar, pie, card, and map visuals—were designed to represent diverse dimensions.
5. **Insight Derivation:** Observations were made for key attributes like delivery time, freshness, and offers.
6. **Validation:** Each dashboard was reviewed to ensure accurate representation and interpretation.This structured methodology made the analysis systematic, precise, and visually communicative. It ensured that insights could be understood easily by both technical and non-technical stakeholders.

5. DASHBOARD 1 – DEMOGRAPHIC OVERVIEW

The first dashboard provides an understanding of the audience base. It focuses on **age, gender, occupation, education, income level, and family size**.

Key highlights include:

- **Gender Distribution:** 57% male and 43% female respondents.
- **Age Group:** 23–27 years (59.54%) dominate the dataset.
- **Occupation:** A majority of the respondents are students or early professionals.
- **Income Level:** Most earn below ₹25,000 monthly, indicating an affordable price range for this market.
- **Education:** Predominantly graduate and postgraduate respondents, showing high digital literacy.
- **Family Size:** Typically 2–3 members, suggesting smaller households with independent food decisions.

Insights:

The demographic profile indicates that the core audience for food delivery services is young, educated, and digitally active. This group is open to online ordering, values convenience, and responds well to digital promotions. Businesses targeting this group can tailor marketing campaigns around affordability, quick service, and online rewards.

6. DASHBOARD 2 – FOOD AND MEAL PREFERENCES

This dashboard captures meal preferences across gender and age groups.

Observations:

- **Most Preferred Meal:** Lunch leads (31.64%), followed by snacks (30.45%), dinner (24.18%), and breakfast (13.73%).
- **Gender Influence:** Both genders show similar meal preferences, but females tend toward snacks while males prefer heavy meals.
- **Age Influence:** Younger participants (18–22) prefer snacks; working professionals (23–27) prefer lunch.
- **Meal Timing:** The lunch and evening periods record higher order volumes.

Insights:

Lifestyle and work schedules significantly influence eating habits. Younger consumers prefer snackable food due to active routines, while older ones prefer main meals. Businesses can leverage this insight to introduce **time-based offers** (e.g., lunch combos for working professionals, evening snack discounts for students).

7. DASHBOARD 3 – QUALITY AND SATISFACTION METRICS

The third dashboard analyzes what factors contribute to customer satisfaction.

Metrics Observed:

- **Freshness:** 3.86 / 5 – most influential factor.
- **Delivery Efficiency:** 3.77 / 5 – second major factor.
- **Food Quality:** 3.50 / 5 – moderate influence.
- **Overall Satisfaction Index:** 3.83 / 5.

Detailed Insight:

Customers highly value freshness and quick delivery. Courteous staff and proper packaging also influence satisfaction. Younger customers show slightly higher satisfaction than older ones, indicating that expectations vary by age group.

This dashboard helped identify which operational areas most affect customer happiness, guiding service providers to focus on maintaining food quality, freshness, and delivery speed.

8. DASHBOARD 4 – DELIVERY EXPERIENCE

This dashboard presents an operational analysis of delivery timelines, regional performance, and wait times.

Key Insights:

- **Average Wait Time:** 38.7 minutes.
- **Delay Percentage:** 14.18% of orders exceeded 45 minutes.
- **Regional Performance:** Average satisfaction 77.58%, with some locations achieving perfect scores.
- **Packaging Quality:** Customers appreciate well-packed and tamper-proof packaging.
- **Geographical Trends:** Dense urban zones experience more delivery delays.

Conclusion:

Efficient delivery operations directly impact brand reputation. Improving route optimization, managing peak-hour demand, and providing real-time delivery tracking can elevate customer trust and long-term loyalty.

9. DASHBOARD 5 – PAYMENT AND OFFER INSIGHTS

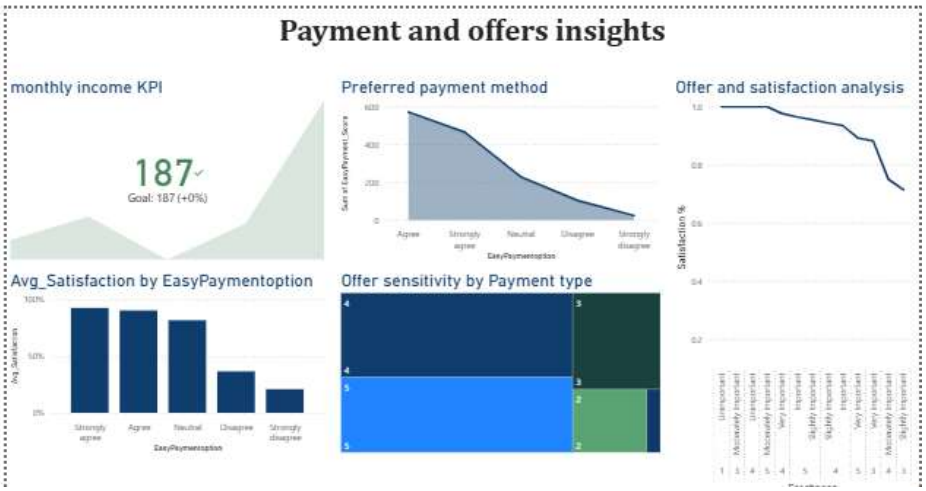
This dashboard focuses on transactional and promotional behavior.

Findings:

- **Preferred Payment:** UPI and digital wallets dominate; cash usage is declining.
- **Offer Usage:** Majority use offers occasionally, while frequent users form a smaller but loyal group.
- **Spending Pattern:** Higher when offers are available.
- **Satisfaction Correlation:** Users availing offers are more satisfied.

Insights:

Digital payments provide ease and trust, while offers encourage spending. Businesses should maintain a balanced offer system—frequent enough to engage customers but not to erode profit margins. Loyalty points, festival discounts, and membership-based offers are effective strategies.



10. ANALYTICAL FINDINGS

From all five dashboards, it is evident that **freshness, delivery efficiency, and offers** form the pillars of customer satisfaction.
Demographics reveal that younger, tech-savvy individuals dominate online food ordering. Satisfaction improves when digital convenience and personalized marketing align.

Key Findings:

- Freshness is the strongest satisfaction driver.
- Digital payment boosts reliability perception.
- Offers create emotional connection with brands.
- Delivery time affects satisfaction more than price.

The insights reinforce that **data-driven decisions can transform the customer experience journey** from ordering to delivery.

11. BUSINESS INSIGHTS

The analytical findings translate into several actionable business recommendations:

1. Optimize delivery logistics to reduce wait time.
2. Introduce dynamic pricing and meal bundles for specific demographics.
3. Use data segmentation to target customers with personalized offers.
4. Monitor freshness and delivery KPIs daily.
5. Strengthen digital payment reliability and offer discounts for prepaid orders.

Implementing these strategies ensures enhanced customer retention, operational efficiency, and long-term brand loyalty.

12. CHALLENGES FACED

Every analytical project presents its own challenges.

Challenges in this study included:

- Handling inconsistent and missing data entries.
- Maintaining dashboard simplicity while including multiple KPIs.
- Learning advanced DAX syntax for dynamic calculations.
- Time management for data modeling and visualization integration.

These challenges built strong problem-solving and technical skills, preparing for real-world analytical tasks.

13. LEARNINGS

This project enhanced multiple technical and professional skills:

- **Technical Skills:** Power BI dashboard design, Power Query transformations, and DAX formula creation.
- **Analytical Skills:** Data interpretation and trend analysis.
- **Soft Skills:** Time management, presentation, and documentation.

The experience bridged academic knowledge with practical implementation, showcasing the importance of data analytics in business decisions.

14. CONCLUSION

The project successfully visualized customer preferences using Power BI and identified key performance drivers in the food industry.
It proved that analytics can bridge the gap between raw data and informed decision-making. The final dashboards highlight areas where businesses can innovate, such as reducing delays and improving freshness.

Overall, the project demonstrates how **Infosys Springboard Internship** helps students gain practical exposure to analytics and visualization in a professional context.

15. FUTURE SCOPE

The project can be extended in multiple directions:

- Real-time dashboards linked with live APIs.
- Predictive analytics for order forecasting.
- AI-based recommendation systems for food preferences.
- Integration with feedback analysis for sentiment tracking.
- Multi-source data inclusion (mobile app logs, reviews, etc.).

With such improvements, this Power BI project can evolve into a full-scale decision-support system for restaurant chains and online food delivery platforms.