FOODTRENDS: CUSTOMER PREFERENCE ANALYSIS

GROUP C

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Problem Statement

1. The Idea

Food delivery platforms like Swiggy and Zomato aim to understand and anticipate customer behavior identifying what drives satisfaction, loyalty, and churn. By monitoring KPIs such as delivery time, food quality, offers, and user feedback in real time, they can personalize experiences, retain customers, and improve operational efficiency

2. The Reality

Despite collecting large volumes of customer data through orders and feedback, most food delivery companies:

- Rely on fragmented reports with limited visualization capability.
- Lack integrated dashboards to analyze satisfaction drivers or churn risks.
- Struggle to identify patterns in user preferences such as cuisine choice.
- Make decisions based on intuition rather than data-backed insights.

3. The Consequences

This results in:

- High churn rates (25–30%) due to unresolved customer dissatisfaction.
- Missed opportunities for targeted promotions and retention campaigns.
- Inefficient delivery operations caused by poor understanding of demand patterns.
- Loss of competitive edge in a highly saturated market where customer loyalty is fragile.

Project Goals

- **Understand Customer Behavior:** Analyze demographics, ordering habits, and preference trends to identify the core consumer segments.
- **Measure Satisfaction Drivers:** Assess how delivery, food quality, offers, and service mpact overall customer satisfaction.
- **Build Power BI Dashboards:** Create interactive dashboards to track KPIs and uncover trends in real time.
- **Deliver Actionable Insights:** Provide strategic recommendations for improving customer retention, optimizing delivery operations, and enhancing user experience.

Dataset Overview

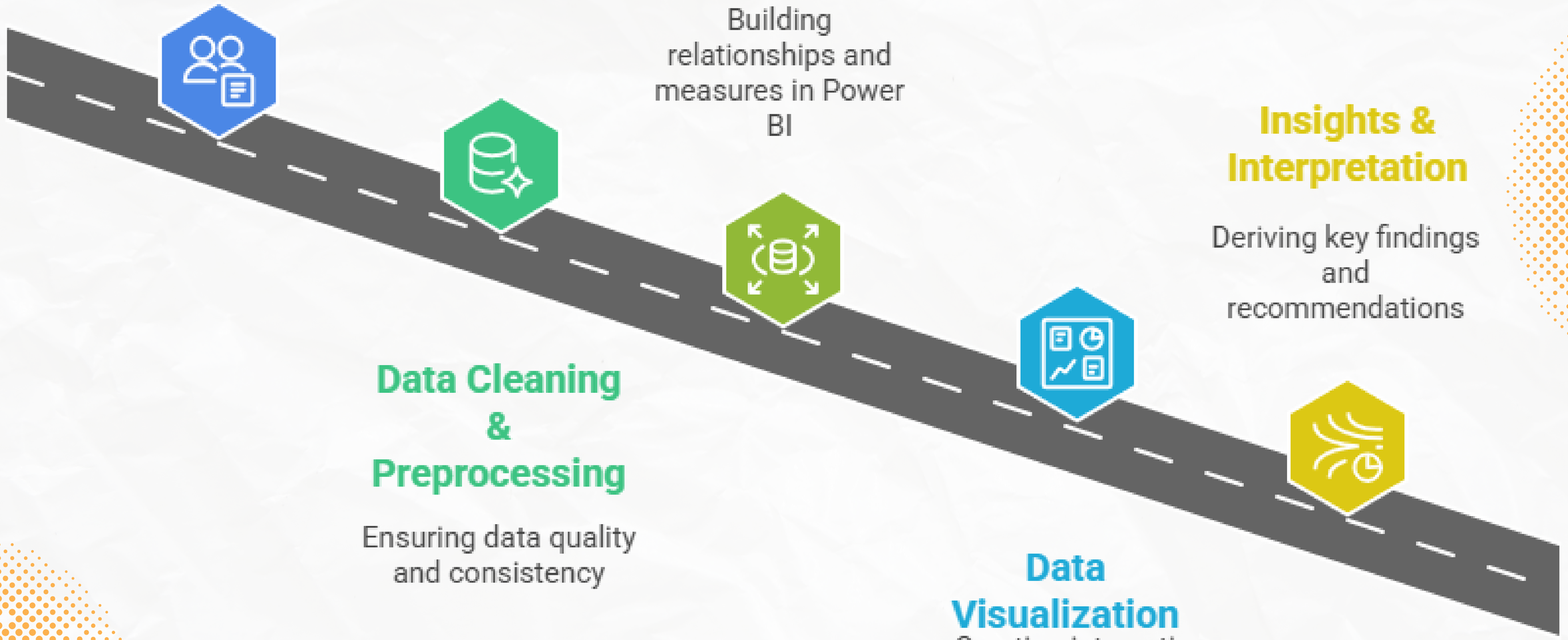
Source: Kaggle – Online Food Delivery Customer Churn Prediction (CSV, imported to Power BI)
Size: 388 records | 55 features | Mixed data types
Key Columns: Age, Gender, Occupation, Income, Delivery Time, Food Quality, Satisfaction

Data Scope

- Customer Demographics (Age, Gender, Income)
- Service Experience (Delivery speed, Packaging, Politeness)
- Order Preferences (Meal type, Order time, Platform choice)
- Satisfaction & Churn indicators (Ratings, Feedback, Output flag)

Methodology

Gathering data and Loading the Data



Data Modeling

Building relationships and measures in Power BI

Insights & Interpretation

Deriving key findings and recommendations

Data Cleaning & Preprocessing

Ensuring data quality and consistency

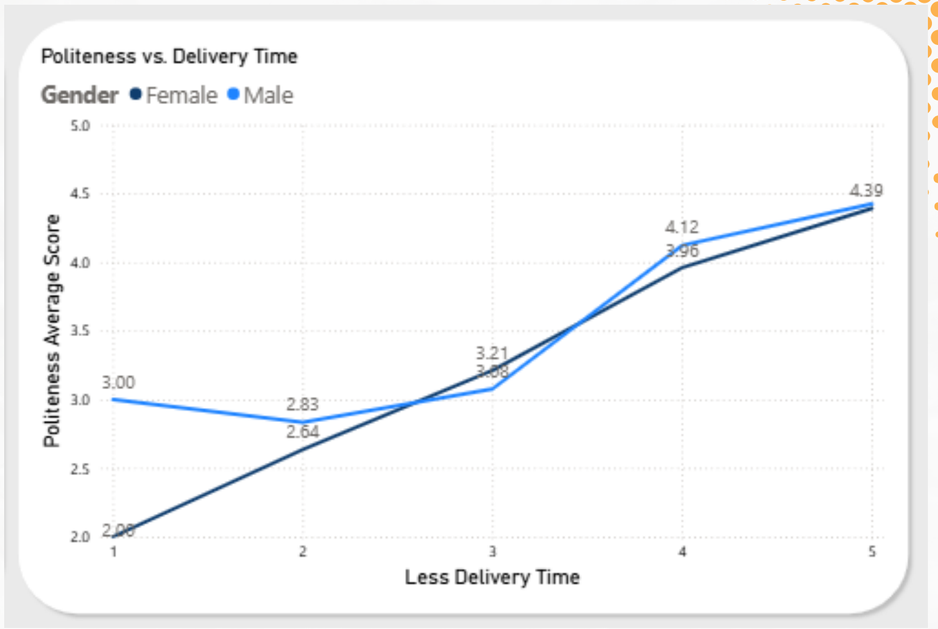
Data Visualization

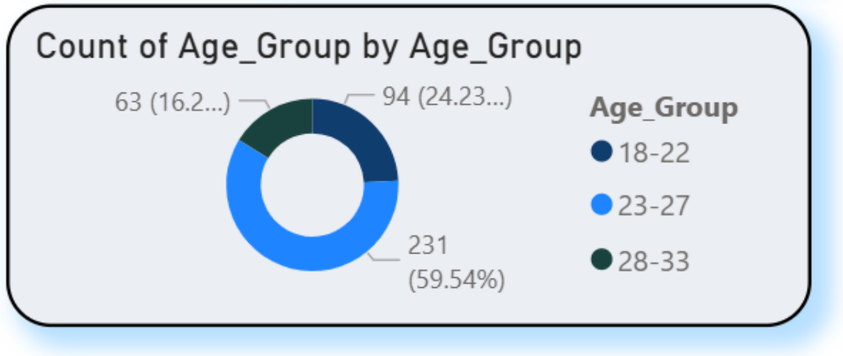
Creating interactive dashboards and charts

Power BI Dashboard Insights

Here, we see that as delivery time decreases, politeness ratings increase for both genders.

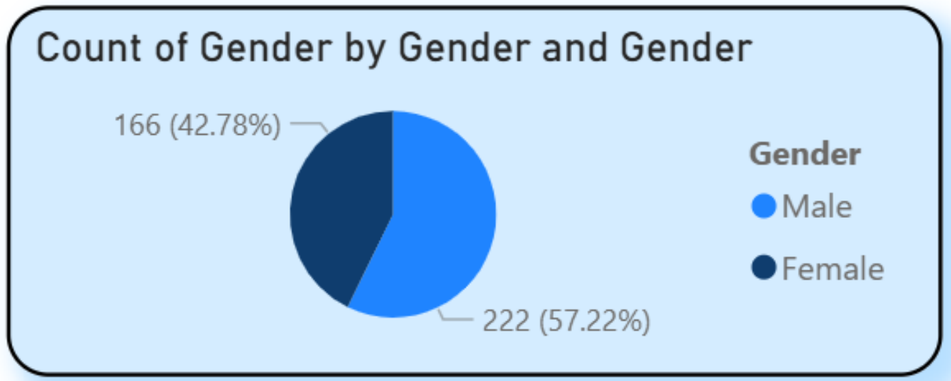
This clearly shows that faster deliveries are perceived as more courteous and professional.



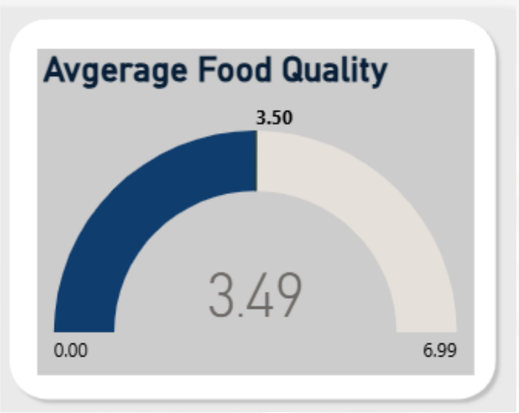


Majority of customers (≈60%) fall in the 23-27 age group, showing that young adults are the key audience for food delivery platforms.

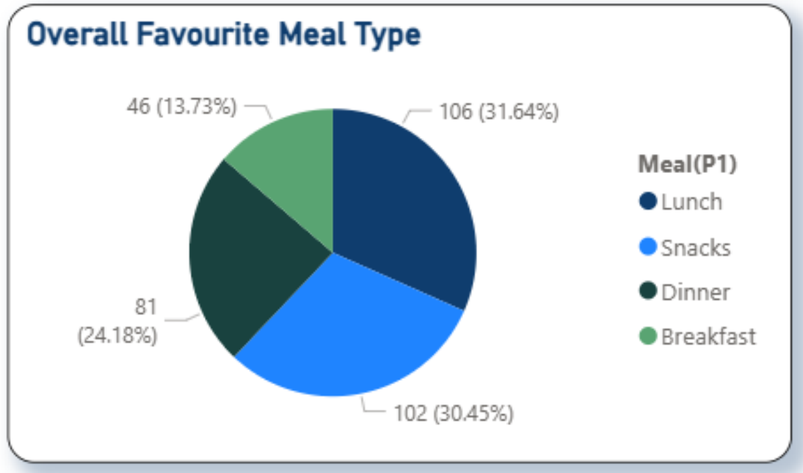
Female users (57%) slightly outnumber males (43%), indicating strong participation of women in online food ordering.



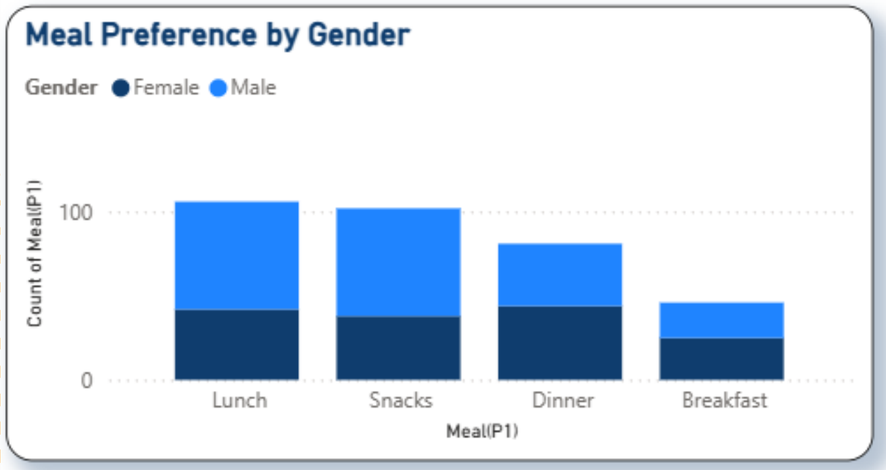
Power BI Dashboard Insights



- **Average Food Quality (3.49)** — indicating that customers rate food quality fairly high.
- **Highly Satisfied Users (46%)** — meaning nearly half of the users are highly satisfied with their experience.

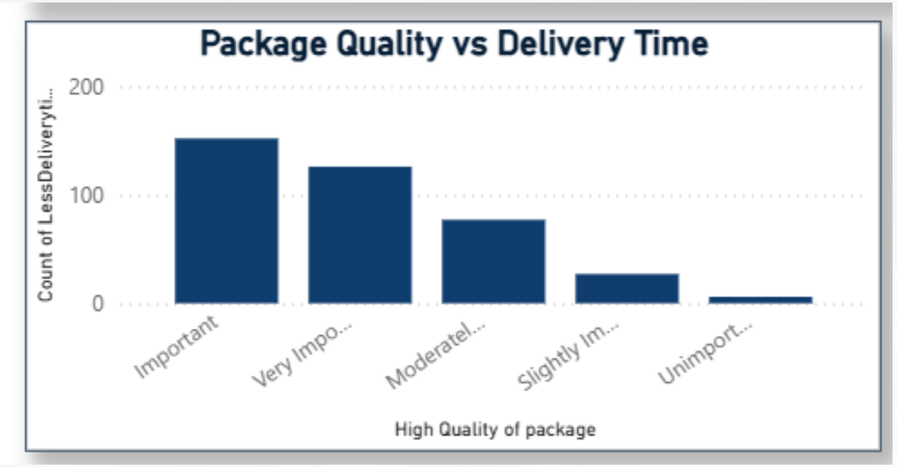


Lunch is the most preferred meal type (31.6%), followed closely by Snacks (30.5%), indicating strong demand during midday hours



Both genders show similar meal preferences, but males have a slightly higher count for Lunch and Snacks, suggesting more frequent midday orders.

Power BI Dashboard Insights

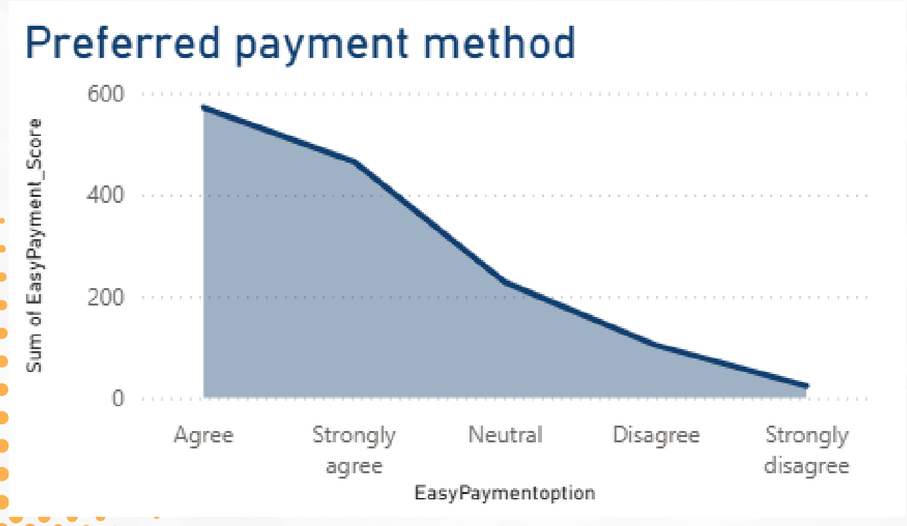


Higher package quality scores are linked with faster delivery times, showing that efficient logistics contribute to better customer satisfaction.

Customer satisfaction levels vary across regions, suggesting differences in delivery experience and service efficiency.

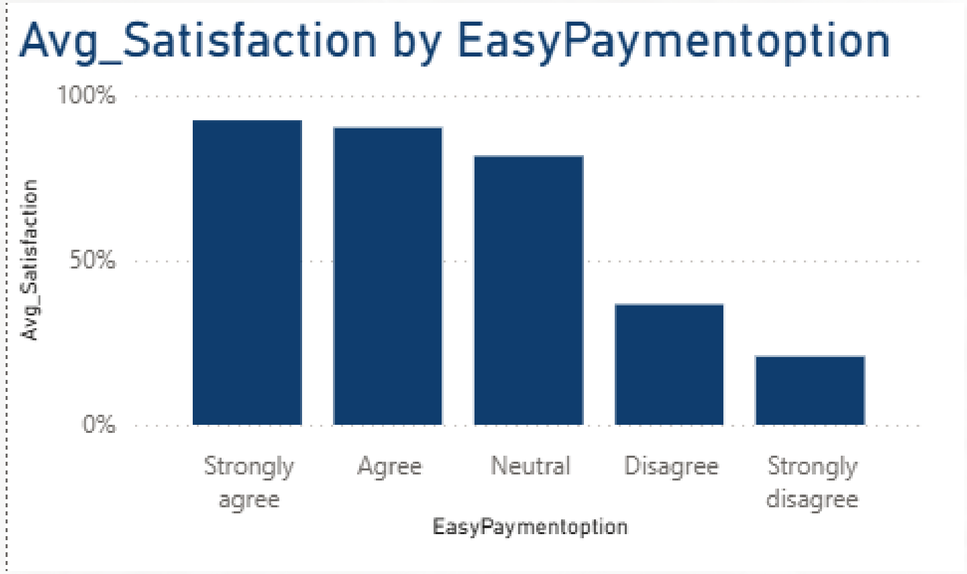
Region-wise Average Satisfaction

Pin code	Avg_Satisfaction
560001	87.50%
560002	83.33%
560003	71.43%
560004	100.00%
560005	66.67%
560006	40.00%
560007	75.00%



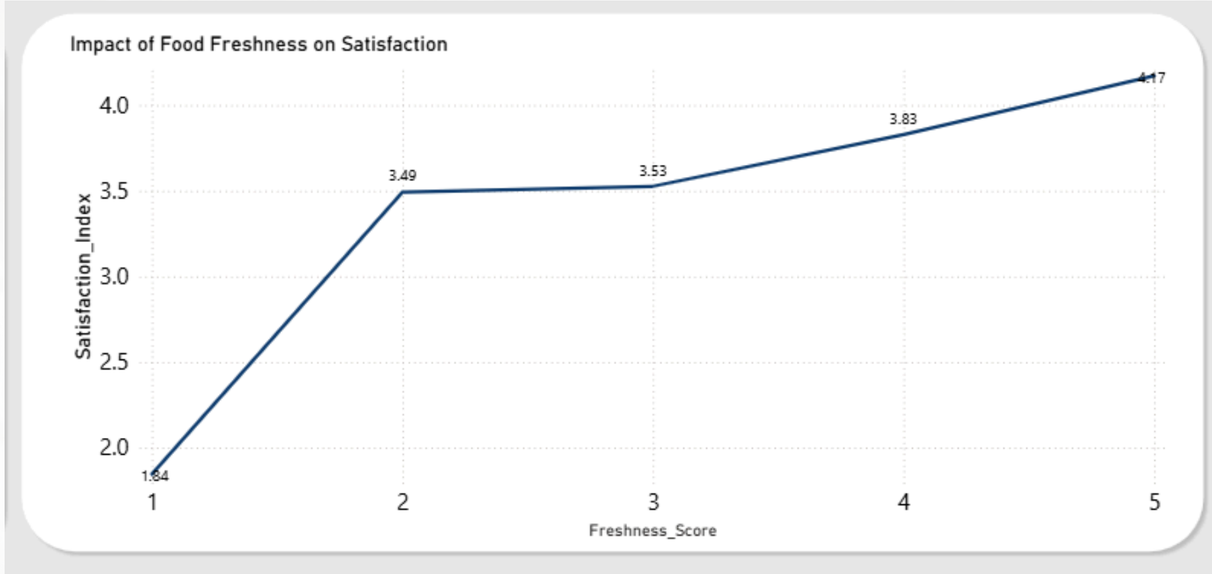
Most customers prefer and agree that easy payment options enhance their experience, emphasizing the importance of seamless transactions

Power BI Dashboard Insights



Customers who find payment methods easy show higher satisfaction, reinforcing that payment convenience drives positive user experience.

Customer satisfaction increases steadily with food freshness, confirming that fresher deliveries directly enhance overall experience.



Key Insights & Recommendations

Insights:

- Majority of customers are aged between 20–35 years
- Fast delivery & polite staff drive satisfaction
- Delays & cold food cause churn
- 25–30% potential churn rate
- Professionals order more but dislike delays
- students value consistent quality

Future Scope/Recommendations:

- Integrate ML models for prediction and personalized recommendations.
- Enable real-time data updates through live platform APIs.
- Apply sentiment analysis on customer reviews for deeper insights.
- Add geo-spatial mapping to visualize location-based performance.
- Automate alerts and notifications for service quality drops.
- Compare multiple platforms (e.g., Swiggy vs. Zomato) for benchmarking.

Benefits of the Projects

1. Provides data-driven insights into customer preferences and satisfaction.
2. Helps identify key churn factors to improve customer retention.
3. Enables real-time decision-making through interactive Power BI dashboards.
4. Enhances operational efficiency in delivery and resource management.
5. Supports personalized marketing and targeted customer engagement.

Conclusion

Project Summary

- This project, FoodTrends, used Power BI to analyze customer behavior and satisfaction within the online food delivery industry.
- By transforming raw survey data into interactive dashboards, we identified clear trends in customer preferences, service quality, and churn behavior.

Key Outcomes

- Developed a data-driven understanding of customer demographics, ordering habits, and satisfaction levels.
- Identified key drivers of customer experience and churn
- Quantified performance through KPIs like satisfaction index and churn rate.
- Enabled real-time decision-making via interactive Power BI dashboards.

Impact

- Helps food delivery businesses improve customer retention, optimize operations, and personalize marketing strategies.
- Demonstrates the value of data visualization in bridging the gap between customer feedback and actionable business intelligence.

Thank You