INFOSYS SPRINGBOARD VIRTUAL INTERNSHIP 6.0

FOOD TRENDS
UNDERSTANDING CUSTOMER PREFERENCES

Group-1, Batch - 11, TEAM – A

Mentor: Ms. Nityasree

Internship duration: 8 weeks

Year: 2026

TEAM MEMBERS:

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1. Project Title

Food Trends – Understanding Customer Preferences

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2. Project Objective

The primary objective of this project is to analyze customer food ordering behavior using structured data analytics and interactive visualization techniques. The project focuses on converting raw customer and restaurant-related data into actionable insights that can support informed business decision-making within the Food & Beverage (F&B) sector.

This project aims to:

- Examine customer demographics and ordering patterns to understand key customer segments and consumption frequency.

- Identify food preferences and consumption behavior to support menu optimization and demand forecasting.

- Evaluate service quality and delivery experience to measure customer satisfaction drivers.

- Analyze promotional impact and decision-making factors such as ratings, affordability, and discounts.

- Generate data-driven business insights that assist restaurants and food delivery platforms in improving operational efficiency and customer engagement.

By leveraging advanced Power BI dashboards, the project transforms structured survey data into meaningful business intelligence. The insights derived support strategic planning, marketing optimization, customer retention strategies, and performance evaluation within the food delivery ecosystem.

From a business perspective, the objective extends beyond visualization — it emphasizes aligning data analysis with operational improvements and revenue growth strategies.

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3. Project Description

3.1 Overview

The "Food Trends – Understanding Customer Preferences" project focuses on analyzing structured food ordering data collected through a comprehensive dataset. The dataset includes:

- Customer demographic details (age, income, occupation, family size)

- Food preferences (vegetarian/non-vegetarian, cuisine type, taste importance)

- Ordering behavior (time of order, platform usage, frequency)

- Service experience (delivery tracking, wait time, freshness perception)

- Promotional and decision-making factors (ratings, discounts, payment mode, location accuracy)

Using Microsoft Power BI, multiple interactive dashboards were developed to visually represent trends and behavioral patterns. These dashboards provide a structured and business-oriented understanding of:

- Who the customers are

- What they prefer

- When they order

- Why they make certain decisions

- How service quality influences satisfaction

The project bridges the gap between raw data and business strategy by enabling data-driven insights that can be used for performance improvement and competitive advantage.

3.2 Project Approach

The project followed a systematic, milestone-based, and business-aligned analytics lifecycle approach to ensure structured execution and reliable insights.

Step 1: Problem Understanding & Requirement Analysis

- Defined key business questions related to customer segmentation, service quality, and promotional effectiveness.

- Identified measurable KPIs aligned with customer behavior and operational performance.

- Studied dataset attributes to understand variable relationships and analytical scope.

Step 2: Data Acquisition & Dataset Familiarization

- Collected structured dataset in CSV format.

- Reviewed column definitions and classified attributes into demographic, behavioral, and service-related categories.

- Identified inconsistencies, missing values, and formatting issues before modeling.

Step 3: Data Cleaning & Preprocessing (Power Query)

- Removed duplicate records and irrelevant entries.

- Standardized categorical values such as Veg/Non-Veg and rating formats.

- Handled missing or incomplete survey responses.

- Validated and corrected data types (text, numeric, date/time).

- Created calculated columns to support segmentation and peak-hour analysis.

Step 4: Data Modeling

- Built relationships between fact and dimension tables.

- Applied star-schema-based logical modeling for structured analysis.

- Optimized model performance for smooth dashboard interaction.

- Ensured referential integrity to maintain consistency across dashboards.

Step 5: KPI Development Using DAX

Calculated key business metrics including:

- Average Customer Rating

- Peak Ordering Time

- Platform Usage Percentage

- Veg vs Non-Veg Distribution

- Satisfaction Indicators

Advanced DAX functions were applied for:

- Aggregation and percentage calculations

- Conditional logic

- Time-based trend analysis

- Dynamic filter-based computations

Step 6: Dashboard Design & Visualization Strategy

- Developed milestone-wise dashboards focusing on different business themes.

- Applied consistent layout, color themes, and structured visual hierarchy.

- Used slicers and filters for interactive exploration.

- Implemented drill-through functionality for deeper analysis.

- Avoided clutter through logical grouping of visuals.

Step 7: Insight Extraction & Business Interpretation

- Identified correlations between demographics, preferences, and ordering patterns.

- Interpreted trends in the context of operational performance and marketing strategy.

- Validated cross-dashboard consistency before final reporting.

Step 8: Validation & Cross-Verification

- Verified consistency between dashboard visuals and underlying dataset.

- Checked DAX formula logic and aggregation accuracy.

- Revalidated KPIs before final publishing.

Step 9: Version Control & Collaboration

- Managed dashboard versions using GitHub and GitLab repositories.

- Maintained structured documentation alignment with dashboard updates.

- Ensured organized milestone tracking and file integrity.

This structured approach ensured accuracy, clarity, and meaningful business insights.

3.3 Technology Used

1. Power BI Desktop

- Used for data modelling, building relationships, and creating interactive dashboards.

- Enabled report publishing, visual analytics, and dynamic filtering using slicers and visuals.

2. Power Query

- Used for data cleaning, transformation, and handling inconsistencies in the dataset.

- Helped in creating a structured and analysis-ready data pipeline before modeling.

3. DAX (Data Analysis Expressions)

- Used to create calculated measures and key performance indicators (KPIs).

- Enabled dynamic aggregation, logical calculations, and filter-based analysis.

4. Microsoft Excel / CSV

- Used for dataset storage, initial exploration, and structure verification.

- Supported manual validation and cross-checking of data before dashboard integration.

5. GitHub

- Used for version control and structured management of dashboard and documentation files.

- Helped track updates, maintain revisions, and organize project repositories.

6. GitLab

- Used for collaborative version management and secure file sharing among team members.

- Served as a backup repository with organized milestone tracking.

3.4 Insights from the Dashboard

Key insights derived from the dashboards include:

- Young customers and students form the largest customer segment

- Taste, food quality, and freshness strongly influence customer satisfaction

- Vegetarian food is preferred by a majority of customers

- Direct call ordering is still widely used along with online platforms

- Ratings, discounts, and accurate location details influence customer decisions

- Lunch and snack times are peak ordering periods

These insights help businesses improve menu planning, service quality, and promotional strategies.

3.5 Real-World Impact for Media and Public Communication

This project demonstrates how data visualization can be used to communicate complex customer behavior in a simple and effective way.

1. **Business Impact:**

• Optimizing menu planning based on high-demand food categories and customer preferences

• Designing targeted promotions aligned with dominant demographic segments

• Enhancing delivery tracking systems to strengthen customer trust and transparency

• Refining pricing strategies based on affordability perception and income distribution

• Supporting peak-hour workforce allocation and demand-based staffing

• Identifying high-performing and underperforming restaurant segments

• Improving customer retention through data-driven loyalty initiatives

• Enabling performance benchmarking across cities and cuisine types

2. **Media & Communication Impact:**

• Enables structured, data-driven storytelling using visual dashboards

• Communicates customer trends and behavioral patterns clearly to stakeholders

• Simplifies complex datasets into actionable visual insights

• Supports transparent reporting and performance monitoring

• Enhances executive-level presentations through interactive analytics

• Facilitates evidence-based decision discussions within management teams

3. **Strategic Value:**

Organizations can leverage similar dashboards to:

• Increase operational efficiency through demand forecasting and resource optimization

• Improve customer experience using satisfaction and service-quality indicators

• Enhance brand positioning by maintaining high ratings and consistent quality

• Support revenue optimization through targeted campaigns and pricing alignment

• Strengthen competitive analysis through performance benchmarking

4. Timeline Overview

The project was completed in multiple weeks, progressing from data understanding and preprocessing to final dashboard analysis and reporting. Each week aligned with internship milestones to ensure timely completion and quality outcomes.

Week	Activities Planned	Activities Achieved
Week 1	Dataset collection and understanding	Collected dataset and completed initial exploration of data structure
Week 2	Data cleaning and preprocessing	Cleaned dataset, handled missing values, validated data types
Week 3	Customer profile dashboard development	Developed demographic-based dashboards and analyzed customer profiles
Week 4	Food preference and ordering pattern analysis	Built dashboards for cuisine preferences and ordering behavior trends
Week 5	Analysis of platforms, wait time, and peak hours	Evaluated ordering platforms, wait-time distribution, and peak demand hours
Week 6	Service quality and decision factor analysis	Analyzed delivery tracking, food freshness, payment ease, and customer trust factors
Week 7	Restaurant performance and promotions analysis	Developed dashboards for performance metrics, city-wise comparison, and promotions impact
Week 8	Final validation and project reporting	Conducted overall dashboard validation, completed documentation, reporting, and final review

5a. Key Milestones

Milestone	Task Accomplished	Date
Milestone 1	Data understanding and preprocessing	9 January 2026
Milestone 2	Development of first three dashboards (Customer Profile, Food Preference, Ordering Patterns)	23 January 2026
Milestone 3	Development of dashboards focused on service quality and customer decision factors	30 January 2026
Milestone 4	Final dashboards on restaurant performance, promotions analysis, final review and reporting	6 February 2026

Milestone 1: Data Understanding and Preprocessing

Date: 9 January 2026

Step 1: Data Collection

- Collected dataset related to customer demographics, food preferences, and ordering patterns.

- Verified data source reliability.

Step 2: Data Understanding

- Identified different variables (Age, Income, Platform, Cuisine, Wait Time, etc.).

- Classified data types (numerical, categorical, date/time).

Step 3: Data Cleaning

- Handled missing values.

- Removed duplicate entries.

- Corrected inconsistent data formats.

Step 4: Data Preprocessing

- Converted categorical variables into suitable format.

- Standardized/normalized numerical data if required.

- Created derived features (e.g., peak hour category).

Step 5: Initial Data Exploration

- Generated summary statistics.

- Identified patterns and trends.

- Prepared clean dataset for dashboard development.

Milestone 2: Development of First Three Dashboards

Date: 23 January 2026

Step 1: Customer Profile Dashboard

- Analyzed age, income, and spending behavior.

- Built visualizations (bar charts, pie charts).

- Identified key customer segments.

Step 2: Food Preference Dashboard

- Analyzed most ordered cuisines.

- Compared vegetarian vs non-vegetarian preferences.

- Identified seasonal or trend-based changes.

Step 3: Ordering Patterns Dashboard

- Analyzed peak ordering hours.

- Studied weekday vs weekend trends.

- Examined platform-wise usage patterns.

Milestone 3: Service Quality & Decision Factors Dashboards

Date: 30 January 2026

Step 1: Service Quality Analysis

- Evaluated delivery time and customer ratings.

- Analyzed impact of wait time on satisfaction.

- Identified service bottlenecks.

Step 2: Customer Decision Factors

- Studied influence of price, health, taste, and convenience.

- Compared promotional impact on customer loyalty.

- Built comparative visual dashboards.

Milestone 4: Final Dashboards & Reporting

Date: 6 February 2026

Step 1: Restaurant Performance Dashboard

- Analyzed top-performing restaurants.

- Compared revenue and customer retention.

- Identified underperforming segments.

Step 2: Promotions Analysis

- Studied impact of discounts and offers.

- Evaluated increase in orders during campaigns.

- Measured return on promotional strategies.

Step 3: Final Review

- Cross-verified all dashboard insights.

- Validated accuracy of analysis.

- Optimized visual clarity.

Step 4: Report Preparation

- Compiled findings.

- Added screenshots of dashboards.

- Summarized key insights and recommendations.

5b. Project Execution Details

The project execution followed a structured analytical workflow to ensure data integrity, accuracy of KPIs, and professional dashboard development. Each stage was implemented systematically from preprocessing to reporting.

1. Dataset Cleaning and Transformation Using Power Query

Data preprocessing was carried out using the Power BI Query Editor to transform the raw dataset into a structured and analysis-ready format.

Query Editor Steps Applied:

- Source: Imported the structured CSV dataset and confirmed successful data loading.

- Navigation: Selected the relevant data table and excluded unnecessary sheets or metadata.

- Promoted Headers: Converted the first row into column headers to correctly define field names.

- Changed Type: Assigned appropriate data types (text, whole number, decimal, date/time) to ensure proper aggregations and calculations.

- Removed Blank Rows: Eliminated empty or incomplete records to maintain dataset quality.

- Removed Bottom Rows: Deleted irrelevant footer or summary rows that were not part of the analytical data.

- Replaced Value (Multiple Iterations): Standardized categorical entries and corrected inconsistent formatting across variables to ensure uniform classification.

- Renamed Columns: Updated column names for clarity and professional consistency.

- Removed Columns: Eliminated redundant or non-essential attributes to optimize model efficiency.

These structured transformation steps ensured that the dataset was clean, consistent, and optimized for further modeling and KPI development.

2. KPI Creation Using DAX

Following preprocessing, key performance indicators were developed using DAX (Data Analysis Expressions).

- Created calculated measures such as average ratings, platform usage percentage, vegetarian/non-vegetarian distribution, and peak ordering time analysis.

- Applied aggregation functions (SUM, AVERAGE, COUNT), logical conditions (IF statements), and percentage calculations.

- Implemented dynamic measures responsive to slicers and filters across dashboards.

- Ensured KPI definitions remained consistent across report pages.

This stage enabled accurate and interactive analytical outputs.

3. Dashboard Design with Consistent Layout and Theme

Dashboard development focused on structured visual communication and usability.

- Applied standardized color schemes and consistent formatting across all pages.

- Organized visuals logically to maintain clarity and avoid overcrowding.

- Integrated slicers and filters for interactive exploration.

- Implemented drill-through functionality for detailed insights.

- Maintained uniform KPI card placement and labeling.

The dashboard design ensured intuitive navigation and professional presentation.

4. Validation of Insights Across Dashboards

To maintain analytical consistency:

- Cross-checked KPIs across multiple report pages.

- Verified alignment between related metrics and trends.

- Ensured percentage distributions and totals remained consistent.

This validation process helped prevent logical inconsistencies.

5. Cross-Verification Between Visuals and Underlying Dataset

- Compared dashboard aggregates with raw dataset summaries in Excel.

- Conducted manual validation of totals and percentage calculations.

- Rechecked DAX formulas to confirm correct filter context handling.

This ensured complete accuracy of reported insights.

6. Version Control and Repository Management (GitHub & GitLab)

- Maintained structured repositories for dashboard files, documentation, and presentations.

- Tracked milestone updates and revisions systematically.

- Ensured file synchronization among team members.

- Used GitLab as an additional collaborative and backup repository.

This approach supported organized workflow management.

7. Documentation and Reporting

- Prepared detailed documentation covering objectives, methodology, preprocessing steps, KPIs, and insights.

- Incorporated dashboard screenshots to support explanations.

- Ensured consistency between analytical outputs and written interpretations.

- Structured the final report in a professional format suitable for evaluation.

6. Snapshots / Screenshots

6.1 Page 1: Customer Profile Intelligence
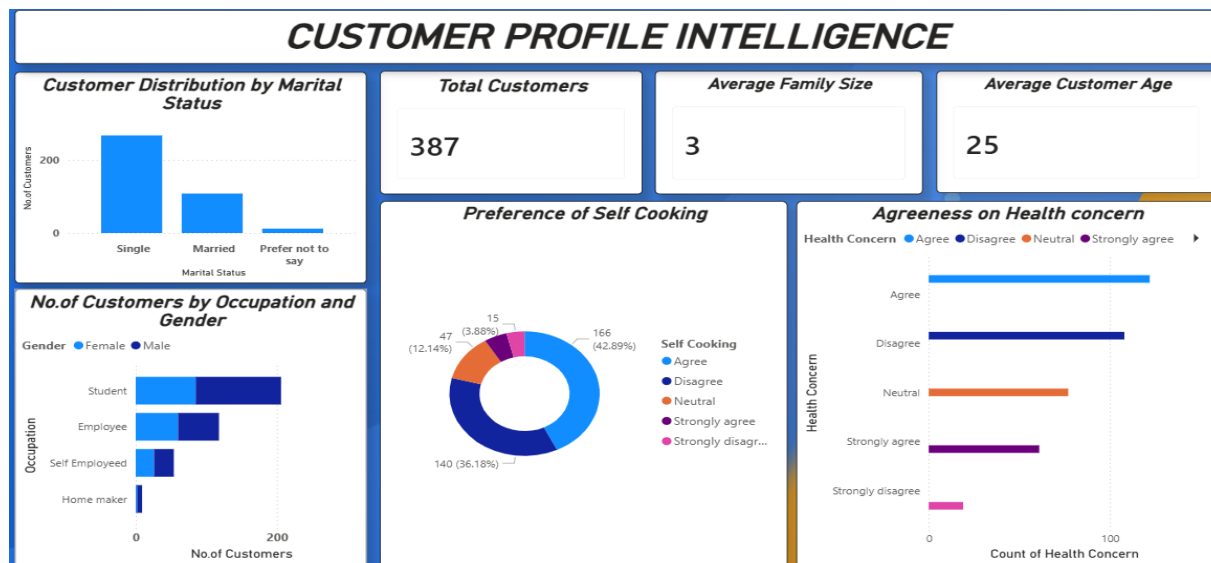
Customer Profile Intelligence – Overview

• This page presents a structured demographic analysis of the customer base, including occupation and gender distribution, total customer count, average age, and average family size.
• It serves as the foundational layer of analysis by identifying who the primary customers are before evaluating their ordering behavior and preferences.

Key Insights

• The majority of customers belong to a younger age group, indicating a digitally active and convenience-oriented segment.
• Students and working professionals form the dominant occupational categories.
• A significant proportion of customers are single and belong to smaller family units, reflecting urban lifestyle patterns.

Business Implications

• Enables businesses to design pricing strategies and meal combinations suited to the dominant demographic group.
• Assists in developing loyalty programs and engagement strategies aligned with the lifestyle and purchasing behavior of core customers.

6.2 Page 2: Order & Food Preference Analysis
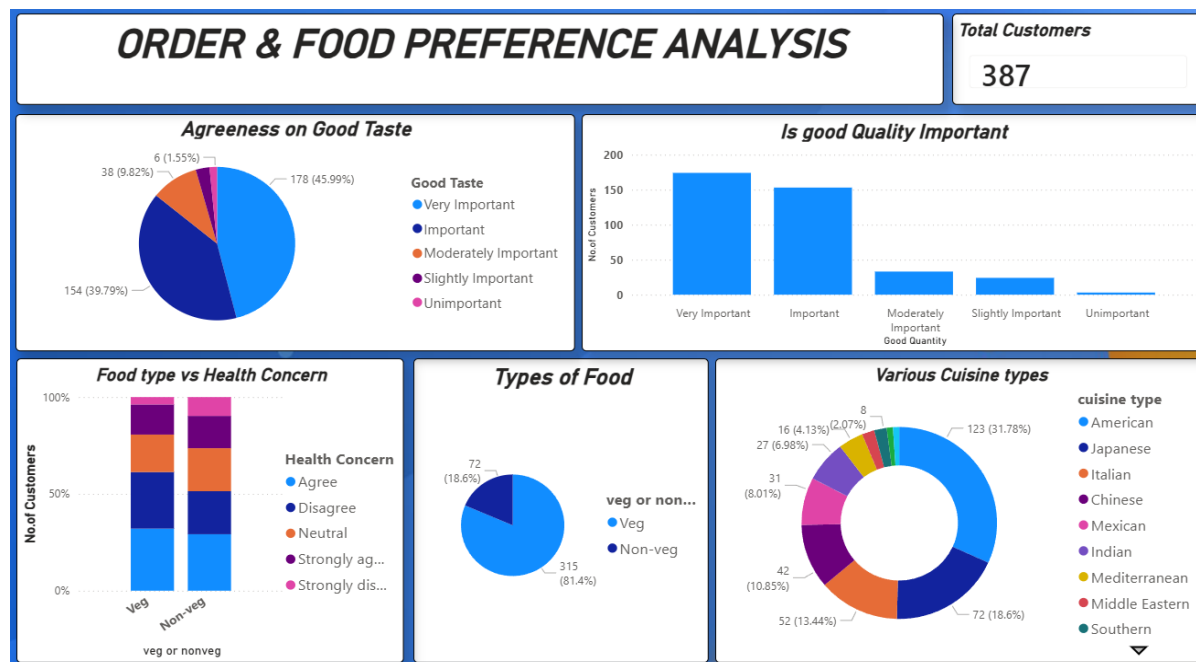
Order & Food Preference Analysis – Overview

• This page analyzes customer preferences related to taste, food quality, health concerns, food type selection, and cuisine choices.

• It focuses on understanding what customers value most in their food and how those preferences influence ordering behavior.

Key Insights

• A majority of customers consider good taste and quality as very important factors in their food choices.

• One food category shows clear dominance in overall preference compared to the other.

• Health considerations influence food type selection for a significant portion of customers.

• Certain cuisine types attract higher demand, indicating strong preference patterns.

Business Implications

• Helps in prioritizing menu items based on dominant food categories and cuisine demand.

• Emphasizes the need to maintain consistent taste and quality standards.

• Supports strategic menu expansion aligned with health-conscious customer segments.

• Assists in designing targeted promotions around high-demand cuisine categories.

6.3 Page 3: Ordering Patterns & Platform Behaviour
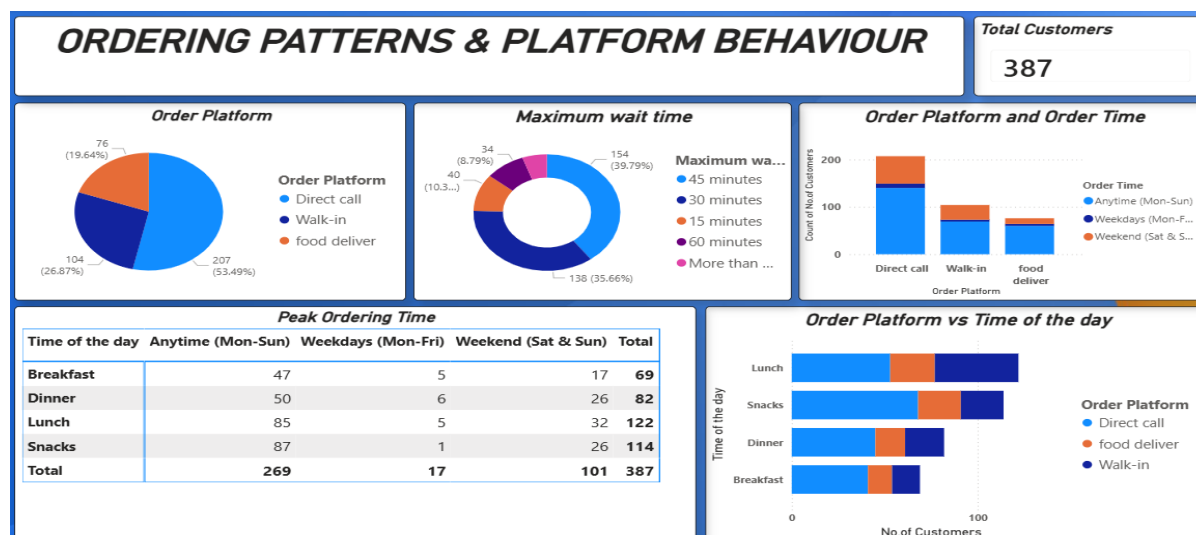
Ordering Patterns & Platform Behaviour – Overview

• This page analyzes customer ordering patterns across different platforms, preferred order times, and acceptable wait durations.

• It examines how customers choose to place orders and when demand is highest during the day and week.

Key Insights

• One ordering channel contributes the highest share of total orders, while others account for moderate usage.

• Most customers have a defined wait-time expectation, with shorter wait periods being more preferred.

• Lunch and snack hours emerge as peak ordering periods.

• Weekend orders contribute significantly to overall demand.

• Platform usage varies across different times of the day.

Business Implications

• Supports workforce and delivery planning during peak hours to reduce wait times.

• Helps optimize operational efficiency based on demand distribution.

• Assists in platform partnership and channel strategy decisions.

• Enables better demand forecasting and resource allocation for improved service performance.

6.4 Page 4: Delivery Experience & Service Quality
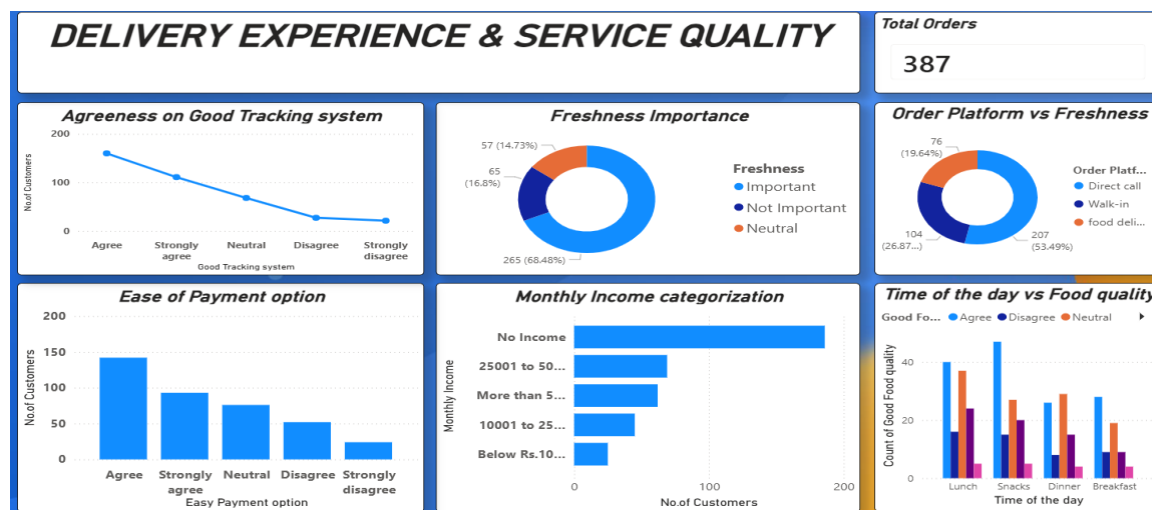
Delivery Experience & Service Quality – Overview

• This page evaluates customer perceptions related to delivery tracking systems, freshness of food, ease of payment, income distribution, and the relationship between time of day and food quality.

• It focuses on understanding how service-related factors influence customer satisfaction and overall experience.
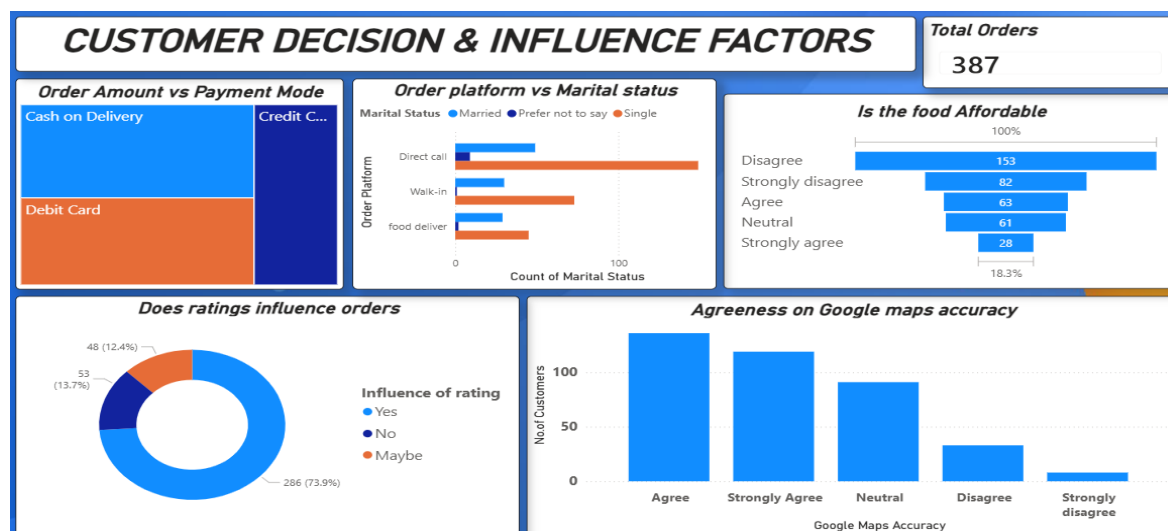
Key Insights

• A majority of customers agree that an effective tracking system enhances their ordering experience.

• Freshness is considered highly important, with most customers associating it directly with food quality.

• Ease of payment plays a significant role in customer convenience and satisfaction.

• Income distribution indicates varied purchasing power across customer segments.

• Perception of food quality varies slightly across different times of the day.

Business Implications

• Highlights the importance of maintaining a reliable tracking system to build customer trust.

• Emphasizes strict quality control and freshness standards to maintain strong satisfaction levels.

• Supports the need for seamless digital payment options to enhance user experience.

• Assists in aligning pricing strategies with income segments.

6.5 Page 5: Customer Decision & Influence Factors

CUSTOMER DECISION & INFLUENCE FACTORS

Total Orders
387

Order Amount vs Payment Mode
- Cash on Delivery
- Credit C...
- Debit Card

Order platform vs Marital status
Marital Status ● Married ● Prefer not to say ● Single
Order Platform: Direct call, Walk-in, food deliver
Count of Marital Status

Is the food Affordable
100%
- Disagree 153
- Strongly disagree 82
- Agree 63
- Neutral 61
- Strongly agree 28
18.3%

Does ratings influence orders
- 48 (12.4%)
- 53 (13.7%)
- 286 (73.9%)

Influence of rating
● Yes
● No
● Maybe

Agreeness on Google maps accuracy
No.of Customers
Google Maps Accuracy: Agree, Strongly Agree, Neutral, Disagree, Strongly disagree

Customer Decision & Influence Factors – Overview

• This page analyzes the key factors influencing customer purchasing decisions, including payment mode preference, affordability perception, rating influence, marital status vs platform choice, and accuracy of location services.

• It focuses on understanding what drives customers to complete an order and what affects their final decision-making process.
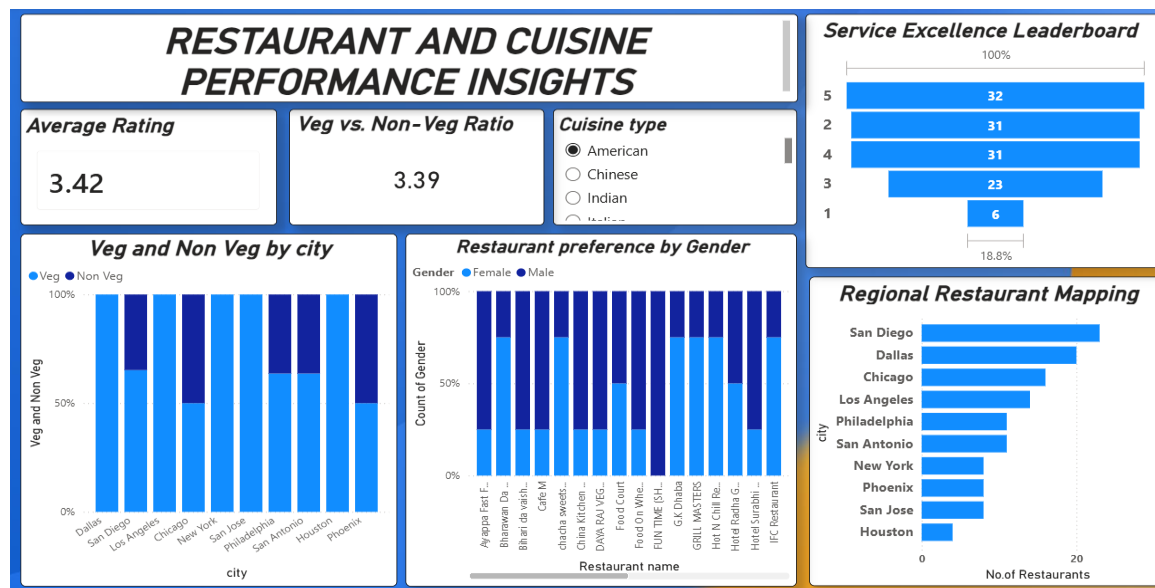
Key Insights

• Payment mode distribution shows varied preferences, indicating the importance of offering multiple payment options.

• Affordability perception differs among customers, suggesting price sensitivity within certain segments.

• A significant proportion of customers consider ratings before placing an order.

• Most customers value accurate location and map integration during ordering.

Business Implications

• Highlights the need to support diverse payment options to enhance conversion rates.

• Supports strategic pricing decisions aligned with affordability perception.

• Emphasizes maintaining strong ratings and review management.

• Encourages accurate location integration to improve customer confidence and reduce order friction.

6.6 Page 6: Restaurant & Cuisine Performance Insights

Restaurant and Cuisine Performance Insights – Overview

• This page evaluates restaurant performance using average ratings, veg vs non-veg distribution, cuisine selection, gender-based restaurant preference, service excellence ranking, and regional restaurant mapping.

• It focuses on measuring performance levels across restaurants and identifying demand variations by city and cuisine type.

Key Insights

• The overall average rating reflects moderate customer satisfaction levels.

• The veg vs non-veg ratio varies across cities, indicating regional preference differences.

• Certain cuisine types show stronger selection trends.

• Restaurant preference differs across gender segments.

• Service excellence leaderboard highlights top-performing restaurants.

• Regional mapping shows variation in restaurant concentration across cities.

Business Implications

• Supports benchmarking of restaurant performance using rating metrics.

• Helps identify high-performing and underperforming locations for improvement planning.

• Assists in city-wise expansion strategy and cuisine diversification.

• Enables targeted quality improvement initiatives for lower-rated restaurants.

• Provides insights for competitive positioning and regional market analysis.

6.7 Page 7: Promotion, Time & External Impact Analysis
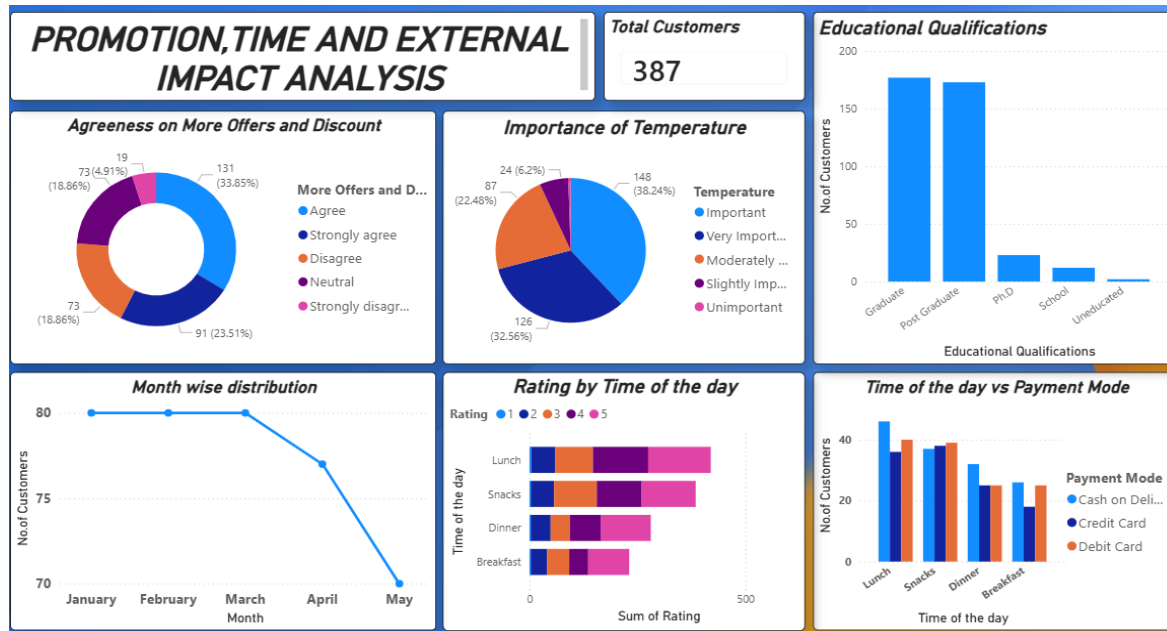
Promotion, Time and External Impact Analysis – Overview

• This page analyzes the influence of promotional offers, external factors such as temperature, educational background of customers, monthly order trends, rating variation by time of day, and payment mode distribution across different time periods.

• It focuses on understanding how external conditions and promotional strategies affect customer behavior and ordering patterns.

Key Insights

• A significant portion of customers respond positively to offers and discounts, indicating promotion-driven behavior.

• Temperature and external conditions show measurable influence on ordering decisions.

• Monthly distribution reflects relatively stable demand with slight variation across periods.

• Ratings vary across different times of the day, suggesting service perception differences during peak hours.

• Payment mode preference changes slightly depending on the time of the day.

• Majority of customers belong to higher educational qualification categories, indicating informed and review-conscious consumers.

Business Implications

• Supports the implementation of targeted promotional campaigns to increase order volume.

• Encourages seasonal or weather-based marketing strategies.

• Helps in planning promotional timing based on monthly demand patterns.

• Assists in maintaining service consistency during peak rating-sensitive hours.

• Enables better alignment of payment options and promotional strategies with customer profiles.

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7. Challenges Faced

7.1 Data Cleaning Challenges

- Inconsistent category labels (Veg/Non-Veg, rating levels)

- Power BI Service does not support true parallel dashboard editing, making team collaboration difficult

- Each update required publishing and pulling the latest version from the cloud

- Missing or unclear survey responses

Resolution:

- Adopted a **sequential editing workflow** for Power BI dashboards.

- Assigned clear responsibility for report updates to avoid conflicts.

- Standardized values using Power Query and handled missing data carefully.

7.2 Visualization Challenges

- Managing multiple dashboards with consistent KPIs

- Avoiding overcrowded visuals

Resolution:
Used slicers, clean layouts, and milestone-wise dashboard creation.

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8. Learnings & Skills Acquired

8.1 Technical Skills

- During this project, strong technical foundations in data analytics and visualization were developed. The team gained hands-on experience in **data cleaning and preprocessing**, including handling missing values, correcting inconsistencies, and validating data accuracy using Power Query.
- Practical exposure to **Power BI data modeling** helped in creating structured relationships between tables and designing efficient data models for accurate reporting.
- The use of **DAX calculations** strengthened the ability to build calculated measures, KPIs, percentage distributions, and logical expressions for deeper analysis.
- Additionally, **dashboard design skills** were enhanced by learning how to create clean, interactive, and user-friendly visual layouts with slicers, filters, and drill-through features while maintaining visual consistency and clarity.

8.2 Analytical and Problem-Solving Skills

- The project significantly improved analytical thinking by enabling the identification of **customer trends and behavioral patterns** across demographics, food preferences, and ordering platforms.
- The team developed the ability to **convert raw data into meaningful insights**, moving beyond numbers to interpret what the data reveals about customer decisions.
- A strong emphasis was placed on **business-oriented data interpretation**, where findings were aligned with real-world implications such as improving customer satisfaction, optimizing promotions, and enhancing service quality. This strengthened data-driven decision-making capabilities.

8.3 Future Enhancements

- Integrate real-time data sources such as live order transactions to enable dynamic and continuously updated dashboards.
- Implement predictive analytics models to forecast peak demand periods and customer ordering trends.
- Develop a customer churn prediction model to identify at-risk customers and improve retention strategies.
- Introduce a personalized recommendation system based on historical ordering behavior and preferences.
- Expand the dataset to include broader geographic regions for more comprehensive market analysis.
- Incorporate advanced segmentation techniques for deeper customer profiling and targeted marketing strategies.
- Integrate financial metrics such as revenue, profit margins, and cost analysis for enhanced business performance tracking.
- Develop mobile-friendly dashboard versions for on-the-go executive decision-making.
- Apply machine learning algorithms to identify hidden patterns and behavioral clusters within the dataset.
- Automate data refresh and reporting workflows to reduce manual intervention and improve efficiency.

8.4 Soft Skills and Team Collaboration

- The internship enhanced **team coordination and structured communication**, as tasks were clearly divided and milestones were followed systematically.
- Time management skills improved through milestone-based execution and deadline adherence over the 8-week period.
- The project also strengthened **presentation and documentation skills**, as insights had to be clearly articulated in dashboards, reports, and presentations in a professional format.
- Collaborative version control using GitHub and GitLab further improved responsibility sharing and workflow discipline.

8.5   Domain Knowledge and Application

- This project provided practical exposure to **food industry trends and customer behavior analysis** within the Food & Beverage (F&B) domain.
- The team gained a deeper understanding of **service quality factors**, including delivery tracking, freshness perception, affordability, and payment convenience.
- The project also applied the **4 Ps of Marketing framework** in a real-world analytics context:

  - o **Product:** Analysis of vegetarian and non-vegetarian food preferences and cuisine choices.
  - o **Price:** Evaluation of affordability levels and spending behavior patterns.
  - o **Place:** Study of online ordering platforms and direct ordering methods.
  - o **Promotion:** Impact of ratings, reviews, and discounts on customer decision-making.

This integration of analytics with marketing principles enhanced both technical and domain-based understanding.

9. Testimonials from Team

Jai Akash L J

• Collected and consolidated the project dataset, ensuring data completeness and reliability before analysis.

• Performed structured data preprocessing using Power Query, including cleaning, transformation, and validation.

• Designed and developed Page 1 and Page 4 dashboards aligned with defined KPIs and objectives.

• Conducted overall dashboard validation to ensure logical consistency and calculation accuracy.

• Led task allocation, milestone planning, and coordination among team members.

• Managed GitHub and GitLab repositories, maintaining structured version control and documentation updates.

• Ensured consistency in formatting, layout structure, and presentation standards across deliverables.

Harshini Ganesan

• Contributed to dataset preprocessing activities, supporting cleaning, formatting, and validation processes.

• Designed and developed Page 2 dashboard focusing on food preference analysis.

• Developed Page 7 dashboard analyzing promotions and external influence factors.

• Verified data accuracy before integrating visuals into dashboard reports.

• Ensured consistency between calculated KPIs and visual representations.

• Participated in milestone-based review discussions and refinement processes.

• Supported alignment between analytical outputs and business objectives.

Lekhana S.R

• Designed and developed Page 3 dashboard analyzing ordering patterns and platform behavior.

• Developed Page 5 dashboard focusing on customer decision and influence factors.

• Conducted structured layout refinement to enhance dashboard clarity and usability.

• Applied multiple design iterations to improve visual balance and readability.

• Contributed to preparation and structuring of the team presentation slides.

• Ensured visual consistency between dashboards and presentation materials.

• Assisted in cross-verification of insights to maintain analytical coherence.

Abhinit Kumar

• Designed and developed Page 6 dashboard focusing on restaurant and cuisine performance analysis.

• Managed milestone documentation and maintained structured project records.

• Assisted in validating KPI calculations and performance indicators.

• Provided suggestions to enhance dashboard structure and visual clarity.

• Ensured alignment between documentation and analytical outputs.

• Participated in review meetings to refine insights and reporting structure.

• Contributed to final quality assurance checks before project submission.

10. Conclusion

This project delivered a comprehensive analysis of customer ordering behavior and food preferences within the Food & Beverage (F&B) sector through the structured application of Business Intelligence tools. Leveraging Power BI, Power Query, and DAX, the team transformed raw survey data into actionable intelligence aligned with operational and strategic decision-making objectives.

Through systematic data preprocessing, optimized data modeling, KPI development, and rigorous validation processes, the project identified critical performance indicators including peak demand periods, dominant customer segments, affordability sensitivity, cuisine preference trends, delivery experience impact, and promotional effectiveness. The dashboards provided a consolidated and data-driven view of customer behavior and restaurant performance, offering clear visibility into operational strengths and areas requiring improvement.

From a strategic perspective, the insights generated support demand forecasting, targeted marketing initiatives, service quality enhancement, performance benchmarking, and revenue optimization strategies. The structured analytical approach enables informed decision-making and strengthens customer-centric planning in a competitive business environment.

The project execution reflected disciplined workflow management, clear role allocation, milestone-based progress tracking, and structured version control using GitHub and GitLab. Data inconsistencies and system-level challenges were addressed through analytical rigor, systematic correction, and cross-verification, ensuring accuracy and reliability of outcomes.

Beyond technical proficiency, this initiative enhanced strategic thinking, analytical interpretation, structured reporting, and collaborative execution. It demonstrates the effective integration of data analytics with business strategy to drive measurable insights and operational value.

This experience reinforces the critical role of analytics in shaping modern, customer-centric business ecosystems and enabling sustainable, data-driven growth.

11. Acknowledgements

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The structured learning resources and practical exposure provided through this internship have significantly strengthened our analytical thinking, technical proficiency, and business interpretation skills. This experience has enhanced our ability to approach data with a strategic mindset, collaborate effectively within a team environment, and execute projects with professional discipline.

Overall, this internship has been a meaningful milestone in our academic and professional journey, reinforcing the value of data-driven decision-making and structured analytical execution in modern business environments.