Scenario 1: **Reducing Customer Complaints**

**and Improving Satisfaction in Food Delivery**

**Services**

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# Step 1: Understand the Business Goal

**Business Case:**

Zomato, a food delivery platform, wants to reduce the rate of customer complaints related to food quality and delivery issues (e.g., late deliveries, incorrect orders, bad food quality) from 30% to 10% over the next 6 months. The goal is to understand the main reasons for negative customer feedback, including food quality issues, delivery experience, and restaurant service, and develop strategies to improve customer satisfaction and reduce complaints.

**Key Objectives:**

* Identify the major reasons behind customer complaints (e.g., bad food quality, incorrect orders, late deliveries,location).
* Determine which restaurant partners or food types have the highest complaint rates.
* Analyze customer behavior to identify patterns that may lead to complaints (e.g., ordering frequency, preferred food types, delivery time preferences).
* Recommend strategies for reducing complaints, such as better restaurant partner vetting, improving delivery logistics, or providing more accurate delivery time estimates.

# Step 2: Questions a Data Analyst Would Ask s Client Responses

|  |  |
| --- | --- |
| **Question** | **Client Response** |
| What are the key performance indicators (KPIs) for reducing complaints? | Complaint rate percentage, customer satisfaction ratings, delivery time, order accuracy, and food quality ratings. |
| Do you have historical complaint data? | Yes, we track complaints related to food quality, order accuracy, delivery issues, and late deliveries for the past year. |
| What customer details do you collect? | Name, age, gender, location, order history, feedback ratings, and complaints. |
| Do you track restaurant data and complaint rates by restaurant? | Yes, we have data on restaurant performance, including average complaint rates, average ratings, and delivery times. |
| Do you track delivery times and related issues? | Yes, we track the time taken for delivery and categorize delays (e.g., restaurant delay, delivery driver delay, etc.). |
| Are there any known issues with specific restaurants or cuisines? | Yes, some restaurants consistently have complaints about food quality and late deliveries, especially during peak hours. |
| Have you implemented any strategies to reduce complaints so far? | We’ve introduced a rating system for both food quality and delivery service, but the complaint rate has not significantly improved. |

**Step 3: Sample Data Collection**

**Customer Information Table**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| customer\_id | name | age | gender | location |
| 101 | Alice | 29 | Female | New York |
| 102 | Bob | 35 | Male | Los  Angeles |
| 103 | Charlie | 42 | Male | Chicago |
| 104 | David | 28 | Male | San  Francisco |

**Transaction Data Table**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| transaction\_id | customer\_id | date | restaurant\_id | amount | complaint |
| 1 | 101 | 2024-01-10 | R123 | 30 | No |
| 2 | 102 | 2024-02-15 | R124 | 50 | Yes (bad food) |
| 3 | 103 | 2024-03-05 | R125 | 20 | No |
| 4 | 101 | 2024-04-20 | R126 | 25 | Yes(Late delivery) |

**Product Information Table**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| restaurant\_id | restaurant\_name | cuisine\_type | average\_delivery\_time | average\_rating |
| R123 | Burger King | Fast Food | 20 minutes | 4.2 |
| R124 | Domino's Pizza | Pizza | 30 minutes | 3.0 |
| R125 | Sushi House | Japanese | 25 minutes | 4.0 |
| R126 | Taco Bell | Mexican | 45 minutes | 3.8 |

# Step 4: Next Steps

Once the business goal and data requirements are clear, the next steps involve:

**Data Cleaning:** Handle missing values, remove duplicates, and standardize formats for dates, IDs, and customer data.

**Exploratory Data Analysis (EDA):** Visualize complaint rates by restaurant, cuisine, customer demographics, and delivery times.

**Feature Engineering:** Create features like "Complaint Probability", "Order Accuracy", and "Delivery Time Deviation".

**Building Insights:** Identify high-risk restaurants, recommend improvements, and suggest personalized actions for high-risk customers.