**Scenario 2: Understanding the Business Goal in**

**EDA & Data Collection**

**Step 1: Understand the Business Goal**

**Business Case:**

An online fashion retailer wants to reduce their return rate from 25% to 15% within one year

**Key Objectives:**

1. Identify customers who have more returns history ,customer frequency

2. Analyzing on which product have more return rate

3. Analyze the feedbacks of the customers like(bad fit, quality, damages and etc.)

4. Identify the seasonal trends and patterns in returns

**Step 2: Questions a Data Analyst Would Ask & Client**

**Responses**

|  |  |
| --- | --- |
| Question | Client response |
| Do you maintain the data of customer frequency and frequency of customers who return the items? | Yes, we maintain customer\_id, Name,  Phone\_number ,Location, gender |
| What product details do you store which have return rate? | Product\_ID, Name, Category,  Price , rating, Discount |
| What are the main reasons for the returns in the feedbacks? | we maintain record of return feedbacks |
| have we noticed any trends in the timing of returns (e.g., are returns mostly happening within a week, two weeks, etc.), What is the current return window policy? | Yes, usually during seasonal and discount period and when we provide high return window |
| Do you maintain payment methods usually return products most? | Yes, we do record offline and online transaction history during an order |

**Step 3: Sample Data Collection**

**Customer Information Table:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Cust\_id** | **Name** | **Age** | **Gender** | **Location** |
| 101 | Bhanu | 18 | Female | Hyderabad |
| 102 | Mahesh | 50 | Male | Warangal |
| 103 | Sridhar | 35 | Male | Nalgonda |
| 104 | surya | 20 | Male | Suryapet |
| 105 | srija | 31 | Female | Hyderabad |

**Product Table:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Prod\_id** | **Cust\_id** | **P\_name** | **price** | **category** | **Discount** |
| 201 | 101 | mobile | 30000 | electronis | 12 |
| 202 | 104 | soaps | 600 | Groceries | 10 |
| 203 | 104 | hoodie | 1800 | Clothing | 40 |
| 204 | 103 | Muscle max | 2000 | Groceries | 5 |
| 205 | 105 | Makeup kit | 3500 | Skin care | 22 |

**Return Response Table:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Prod\_id** | **Cust\_id** | **Order\_id** | **Reasons for return** | **rating** |
| 201 | 101 | 3001 | Damage issue | 1 |
| 203 | 104 | 3002 | Small Sized | 4 |
| 204 | 103 | 3012 | Recived worng product | 2 |
|  |  |  |  |  |
|  |  |  |  |  |

**Transaction Table:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Order\_id** | **Cust\_id** | **Trans\_id** | **Date** | **amount** |
| 3001 | 101 | 20001 | 15-01-2024 | 30000 |
| 3003 | 104 | 20002 | 14-02-2023 | 600 |
| 3002 | 104 | 20003 | 14-02-2023 | 1800 |
| 30069 | 105 | 20004 | 31-03-2005 | 3500 |

**Step 4: Next Steps**

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

* **Data Cleaning**: Addressing missing data, removing duplicates, and fixing formatting issues.
* **Exploratory Data Analysis (EDA)**: Analyzing customer return behavior, sales patterns, and retention trends through visualizations.
* **Feature Engineering**: Creating useful features, such as the "average return rate for customers and products."
* **Generating Insights**: Identifying actionable recommendations based on data patterns and trends.

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