Sales Analysis – Decomposition Plan

# Objectives

- Analyze sales trends over time  
- Identify seasonality and growth patterns  
- Discover geographic patterns in revenue

# Hypotheses

1. Revenue has increased steadily over time  
2. Certain months/seasons have higher sales (e.g., holidays)  
3. City-level differences affect total sales and volume

# Data Preparation

- Join orders with restaurant on r\_id  
- Convert order\_date to datetime format  
- Filter or correct invalid rows (e.g., negative sales\_amount)  
- Aggregate sales: monthly, quarterly, city-wise  
- Create new fields: Year, Month, Quarter  
- Calculate total revenue per city/month

# Key Metrics (KPIs)

- Total Revenue  
- Total Orders / Quantity  
- Average Order Value (AOV)  
- Sales by City  
- Sales Trend over Time

# Planned Visualizations for Dashboard

- Line chart: Revenue trend over time (monthly/quarterly)  
- Bar chart: Revenue by city  
- KPI cards: Total quantity sold, AOV  
- Heatmap or area chart: Seasonality patterns  
- Pie chart (optional): Sales distribution by city or region