Research Plan for Dashboard: Restaurant Sales Analysis for Zomato

1. Research Questions

- What are the key trends in restaurant sales across different time periods (monthly, weekly)?
- Which restaurants, cities, and cuisines are the top revenue contributors?
- How do seasonal and weekly patterns influence customer purchase behavior?
- What are the key performance indicators (KPIs) that define success for Zomato's restaurant partners?
- Where are the biggest growth opportunities based on current data?

2. Hypotheses

- H1: Sales drop significantly during mid-year months due to seasonality or lack of promotions.
- H2: Certain days of the week (e.g., Friday) consistently generate higher revenue.
- H3: A small subset of restaurants (e.g., Domino's) drive a disproportionately large share of total revenue.
- H4: Cities like Tirupati and Bangalore contribute significantly more to sales due to higher demand or population density.
- H5: Indian and North Indian/Chinese cuisines are consistently the top-performing categories across all markets.

3. Visualizations

- **Line Chart**: Monthly revenue trend to highlight seasonal fluctuations.
- **Bar Charts**: Revenue by weekday, top cities, top restaurants, and top cuisines.
- **Pie/Donut Chart**: Cuisine category contribution to total revenue.
- **KPI Cards**: Total revenue, total orders, average order value, total sales volume.
- **Heatmaps/Stacked Bars** (optional): Regional performance or multi-metric comparisons.

4. Data Preparation Steps

- Clean and format date fields to enable time-series analysis.
- Group and aggregate data by relevant dimensions: month, weekday, city, restaurant, cuisine.
- Calculate KPIs: average order value (Total Revenue / Total Orders), sales volume, etc.
- Ensure consistency in categorical variables (e.g., cuisine names) to avoid duplication.
- Handle missing or outlier data, especially for cities or dates with unusual values (e.g., September dip).

5. Dashboard Scope and Boundaries

- **Included**:
    - Temporal trends (monthly, weekly)

- Top 10 performers by restaurant, city, and cuisine
        - Key performance metrics (revenue, orders, AOV, volume)
- **Excluded**:
        - Product-level (menu item) analysis
        - Customer demographic segmentation (unless data added)
        - Operational data like staffing or delivery times

6. Expected Deliverables

- A visual dashboard that presents all KPIs and trends clearly.
- A report summarizing insights and actionable recommendations based on findings.
- A data model that supports dynamic filtering (e.g., by city, restaurant, or month).