Decomposition for Sales Analysis - Zomato Final Project

1. Research Questions and Objectives

- How has total revenue evolved over time (daily, weekly, monthly, and yearly)? - Are there any seasonal patterns or trends in sales volume? - What are the top-selling products or food items? - Which restaurants generate the highest revenue? - How is revenue distributed across different cities and regions? - Is there a significant difference in sales for Veg vs Non-Veg items? - What is the average order value, and how does it vary by restaurant and cuisine type? - What is the revenue growth rate over the analyzed period?

2. Hypotheses

- H1: Revenue increases during weekends and public holidays. - H2: Non-Veg items generate higher revenue compared to Veg items. - H3: Restaurants with diverse cuisines have higher order values. - H4: Top-rated restaurants show higher sales volume. - H5: Certain cities contribute more to total revenue.

3. KPIs and Metrics

- Total Revenue - Sales Volume - Average Order Value - Top Products and Restaurants - Revenue Growth Rate - Revenue Distribution by Cuisine, City, Veg vs Non-Veg

4. Visualizations and Storytelling

- Line Charts for Revenue Trends and Growth Analysis - Bar Charts for Top Products and Restaurants - Pie Charts for Revenue Breakdown - KPIs Cards for Total Revenue, Order Value, Growth Rate - Heat Maps for Sales Density by Region

5. Data Preparation and Cleaning

- Handle missing values and duplicates - Convert date columns to datetime format - Ensure

consistent currency values and numerical prices - Merge datasets using keys (user_id, r_id, f_id) - Calculate Total Revenue and Average Order Value

6. Dashboard and Report Structure

- Overview Section with KPI Cards - Revenue Analysis with Line and Bar Charts - Sales Distribution with Pie Charts and Heat Maps - Insights and Findings in the Report - Recommendations and Strategic Actions