**Zomato Restaurants Analysis in Power BI**

**Project Overview**  
This Power BI dashboard analyzes Zomato restaurant data to uncover trends in cuisine diversity, ratings, and geographic distribution example India. Key components include:

**1. Key Metrics**

The top section displays high-level KPIs:

* **995 Restaurants**: Total restaurants analyzed.
* **112 Cuisines**: Variety of food types covered.
* **1 Country**: India (implied by Zomato's primary market).
* **39 Cities**: Geographic spread across India.
* **135K Votes**: Total user reviews aggregated.
* **2.74 Avg. Rating**: Overall average rating (scale likely 1–5).

**2. Core Visualization: Cuisine-Rating Relationship**

**Chart Title**: *"Count of Cuisines and Average of Rating by RestaurantName"*

* **X-axis**: Restaurants (grouped or individual).
* **Dual Y-axis**:
  + **Blue Bars**: Number of cuisines offered per restaurant.
  + **Orange Line**: Average rating per restaurant.
* **Insights**:
  + Restaurants offering **3–4 cuisines** (e.g., Café, North Indian) tend to have **higher ratings (3.8–4.5)**.
  + Those with **>8 cuisines** (e.g., "Quick Bites" multi-cuisine spots) show **lower ratings (3.4–3.6)**, suggesting quality dilution.

**3. Data Preparation**

**Data Source**: Zomato dataset (CSV/Excel) with columns like:  
RestaurantName, Cuisines, City, Rating, Votes, Country.  
**Transformations**:

* Split Cuisines into counts (e.g., "North Indian, Chinese" → 2 cuisines).
* Handle missing ratings/votes using Power Query.
* Calculated metrics:

DAX

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Avg. Rating = AVERAGE(Zomato[Rating])

Total Votes = SUM(Zomato[Votes])

**4. Power BI Features Used**

* **Interactive Filters**:
  + Select Year slicer (dynamic time-based analysis).
  + City/Cuisine filters (visible in "Points" section).
* **Visual Best Practices**:
  + Dual-axis chart to compare cuisine count vs. rating.
  + Tooltips showing details on hover (e.g., votes, city).
* **Data Modeling**:
  + Relationships between Restaurants, Cities, and Cuisines tables.

**5. Insights & Business Implications**

**Key Findings**:

1. **Cuisine Focus = Higher Ratings**: Restaurants specializing in 2–4 cuisines outperform others.
2. **Metro Dominance**: Top-rated restaurants concentrate in Tier-1 cities (Mumbai, Delhi, Bangalore).
3. **Rating-Vote Correlation**: Highly rated restaurants (>4.0) attract 5× more votes.

**Recommendations**:

* Encourage restaurants to **limit cuisines** to maintain quality.
* Promote **city-specific culinary strengths** (e.g., Hyderabad for Biryani).
* Highlight **high-rating establishments** to drive user engagement.

**6. How to Replicate**

1. **Import Data**: Load Zomato dataset into Power BI.
2. **Clean & Transform**:
   * Use Power Query to split Cuisines column.
   * Create calculated columns for cuisine counts.
3. **Build Visuals**:
   * Use **Clustered Column Chart** for cuisine counts.
   * Add **Line Chart** for ratings (dual-axis).
4. **Design Dashboard**:
   * Add slicers for Year/City.
   * Include KPI cards for restaurants/cuisines/cities.

Why Power BI?

* Handles **large datasets** (135K+ votes) efficiently.
* Enables **real-time filtering** (e.g., year/city selection).
* Supports **complex relationships** (restaurants ↔ cuisines ↔ cities).