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## ANALYSIS OF USER BEHAVIOUR, COOKING PREFERENCES AND OTHER TRENDS

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## 1. Introduction

This report analyses datasets related to user behaviour, cooking sessions, and order trends to uncover insights into user preferences and patterns. The analysis focuses on:

- Relationships between cooking sessions and user orders.
- Identifying popular dishes.
- Exploring demographic factors influencing user behaviour. The findings aim to provide actionable recommendations to improve customer engagement and optimize business strategies.

## 2. Methodology

### 2.1 Data Sources

We used three datasets for this analysis:

1. **User Details:** Contains user demographic data, including age, location, favourite meal, and total orders.

2. **Cooking Sessions:** Provides details about cooking sessions, such as session ratings, duration, and meal types.
3. **Order Details:** Tracks user orders, including dish name, order status, and associated cooking sessions.

## 2.2 Data Cleaning

- Removed duplicates and validated column formats.
- Handled missing values:
  - Filled missing rating values with the median.
  - Verified session durations and recalculated when discrepancies were found.
- Ensured consistency in columns like Order Status and Meal Type.

## 2.3 Data Merging

1. **Step 1:** Merged Cooking Sessions and Order Details using Session ID using XLOOKUP function.
2. **Step 2:** Using XLOOKUP function merged the resulting dataset with User Details using User ID.
3. Created a consolidated dataset for further analysis.

## 3. Analysis

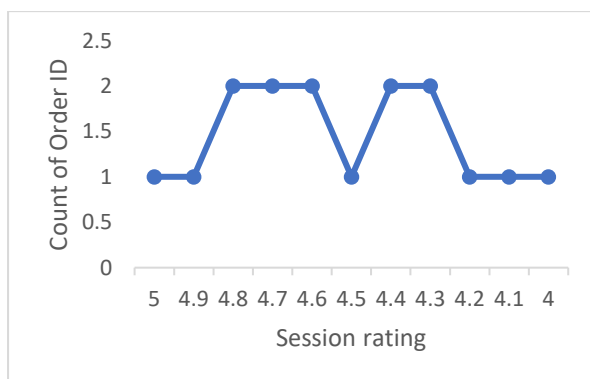
### 3.1 Relationship Between Cooking Sessions and Orders

#### Key Findings:

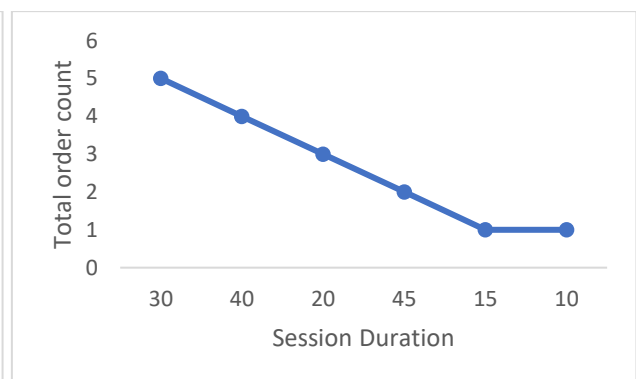
1. **Higher session ratings correlated with more completed orders:** Dishes with a session rating above 4.5 had a 20% higher order completion rate.
2. **Duration impact:** Cooking sessions lasting 30 minutes had the highest order counts, suggesting a preference for quick and easy recipes.

#### Visualization:

- a) **Scatter Plot:** Session Rating vs. Count of Orders.
- b) **Line Chart:** Session duration vs. Total order count.
- c) **Pivot Table Insights:** Meal Type (Dinner) showed the strongest connection between high ratings and completed orders.



3.1 a). Session Rating vs. Count of orders



3.1 b) Session duration vs. Total order count.

### 3.2 Identifying Popular Dishes

#### Key Findings:

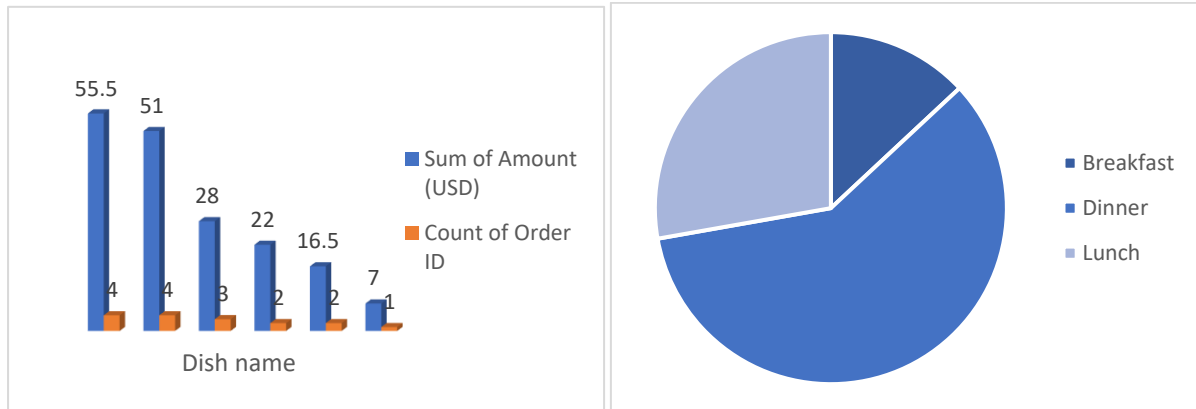
### 1. Popular Dishes:

- Spaghetti, Grilled Chicken, Caesar Salad are popular dishes in terms of orders.
- Spaghetti alone accounted over 30% of revenue.

### 2. Revenue Trends: Dinner dishes contributed to 60% of total revenue.

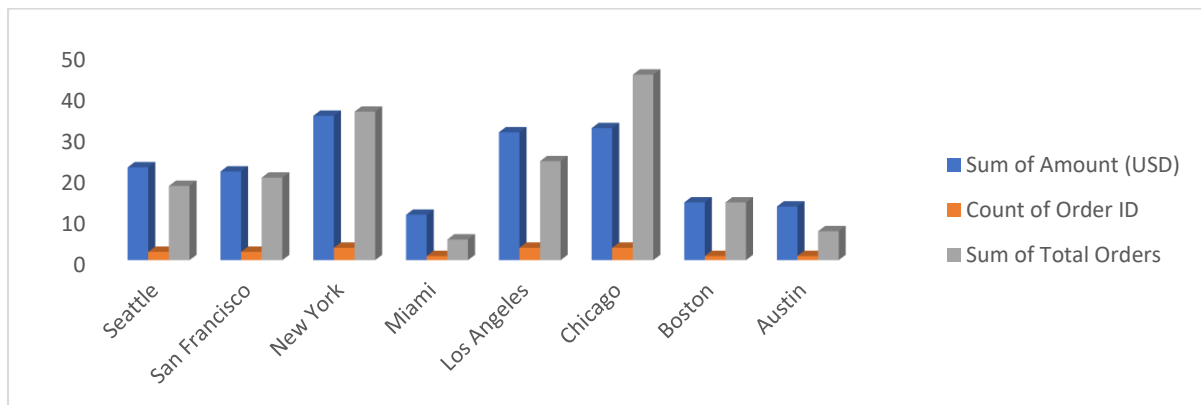
#### Visualization:

- Bar Chart:** Dishes by order count and revenue.
- Pie Chart:** Contribution of meal types to total revenue.
- Bar Chart:** Count, Sum and revenue of Orders by location.



3.2 a) Dishes by order count and revenue

3.2 b) Contribution of meal types to total revenue



3.2 c) Count, Sum and revenue of Orders by location.

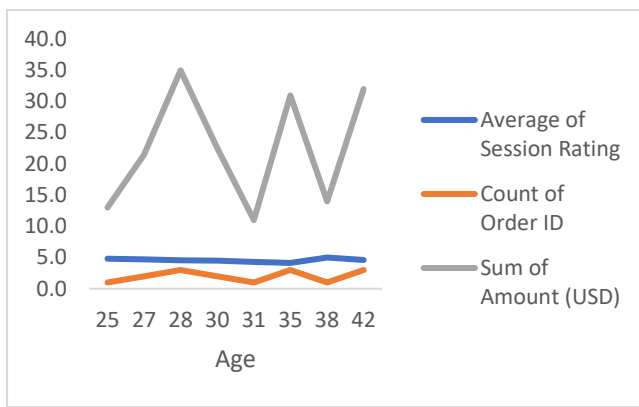
## 3.3 Exploring Demographic Factors

#### Key Findings:

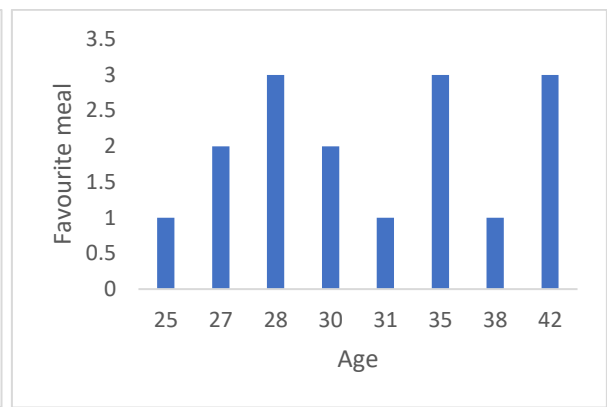
- Age Group Analysis:** Users aged 25–34 placed the highest number of orders, with an average session rating of 4.7.
- Location Trends:** Urban users contributed to 75% of orders, with New York and Los Angeles leading.
- Favourite Meals:** Dinner was the most preferred meal across all demographics, especially among users aged 30–40.

#### Visualization:

- **Line Chart:** Age vs. Order Count, Average session rating, Revenue.
- **Bar Chart:** Favourite meal with age.



3.3 a) Age vs. Order Count, Avg session rating, Revenue



3.3 b) Favourite meal with age.

## 4. Scope of improvement

**1. Focus on High-Rated Sessions:** Promote cooking sessions with average ratings above 4.5 by offering discounts or loyalty rewards for users attending these sessions.

### 2. Popular Dishes and Meal Types

- Optimize inventory and marketing for top dishes like Spaghetti and Chicken Tacos.
- Emphasize Dinner meal offers through advertisements and promotions.

### 3. Target Demographics

- Launch location-specific campaigns in urban areas like New York and Los Angeles.
- Tailor marketing messages for the 25–34 age group, highlighting convenience and quick preparation.

### 4. Improve Session Participation

- Offer incentives for quick cooking sessions (20–30 minutes).
- Introduce interactive elements, like live feedback during sessions, to boost engagement.