**Data Analysis Report**

**User Behaviour, Cooking Preferences, and Order Trends**

1. Introduction

This analysis explores user behavior, cooking preferences, and order trends based on three datasets provided: UserDetails, CookingSessions, and OrderDetails. The goal of the analysis was to gain insights into the following areas:

* Cooking preferences of users.
* The relationship between cooking sessions and user orders.
* The influence of demographic factors, particularly age, on user behavior.

2. Datasets Overview

The analysis uses the following datasets:

* UserDetails: Contains information about users, including their age and other demographic details.
* CookingSessions: Contains information about the cooking sessions, such as the dish name, session duration, and rating.
* OrderDetails: Includes details of each order, including the dish ordered and cost.

3. Data Cleaning Process

To ensure the datasets were ready for analysis, the following data cleaning steps were taken:

* Missing Values: Columns with missing or null values were identified and handled. For instance, missing ratings were replaced with the mean session rating.
* Redundant Columns: Unnecessary columns like Email, Phone, and others were dropped to streamline the analysis.
* Merging Datasets: The datasets were merged on appropriate keys like User ID and Session ID to create a unified dataset for analysis.

4. Analysis and Visualizations:

* Average Time Spent Per Dish

Oatmeal takes the least time (10 minutes), while Grilled Chicken is the most timeconsuming (42.5 minutes). Other dishes like Veggie Burger and Caesar Salad take an intermediate amount of time (around 20 minutes).

For customers seeking quick meals, dishes like Oatmeal and Veggie Burger can be promoted.For users willing to spend more time cooking, Grilled Chicken can be suggested.

* Top-Rated Dishes

Grilled Chicken received the highest rating , followed by Spaghetti .Oatmeal had the lowest rating, suggesting it may need improvement in flavour or presentation.

Grilled Chicken and Spaghetti should be emphasized in marketing as top-rated dishes.

* Cost Distribution Per Dish

Oatmeal is the most affordable dish , while Spaghetti and Grilled Chicken are on the higher end We can promote Oatmeal, Pancakes, and Caesar Salad as budget-friendly options. Position Grilled Chicken and Spaghetti as value-for-money dishes for customers willing to spend a little more.

* Age Distribution of Users

Most users fall within the age range of 25 to 35 years, indicating a young adult demographic. So, target marketing can be done towards the 25-35 age group, focusing on convenience, variety, and health-conscious options.

* Dish Preferences by Age Group

Age Group 25-30 favoured dishes like Caesar Salad, Grilled Chicken, and Spaghetti.

Age Group 36-41 showed a preference for Spaghetti.

5. Conclusion

This analysis provides valuable insights into user behaviour and cooking preferences. By understanding which dishes are favoured by different age groups, their respective cooking times, and cost preferences, the platform can tailor its marketing strategies and menu recommendations to better suit the needs of its user base.