Analysis Report

Introduction

This report aims to summarize the key findings and insights derived from analyzing user behavior, cooking preferences, and order trends using the datasets: UserDetails, CookingSessions, and OrderDetails. The analysis also provides actionable business recommendations based on these findings.

Key Findings

1. Popular Dishes

The analysis of dish preferences revealed the most popular dishes ordered by users. Notably:

- **Spaghetti** was the most frequently ordered dish, particularly during dinner sessions.

- Other popular dishes include **Caesar Salad** and **Grilled Chicken**, catering to lunch and dinner preferences.

This indicates a strong preference for familiar, versatile dishes, particularly during peak meal times.

2. Relationship Between Cooking Sessions and Orders

Grouping data by Dish Name and Meal Type revealed key trends:

- Dinner sessions accounted for the highest number of orders across various dishes.

- Breakfast sessions, while less frequent, showed consistent demand for items like pancakes.

The alignment between cooking sessions and order preferences highlights the importance of optimizing meal availability during dinner hours.

3. Demographic Analysis

The demographic breakdown based on Age and Total Orders uncovered the following:

- Users aged **28-42** placed the majority of orders, indicating that this age group is the most active demographic.

- Younger users (under 27) and older users (above 50) accounted for fewer orders, suggesting untapped potential in these segments.

This points to an opportunity to target younger and older demographics with tailored marketing campaigns and promotions.

4. User Loyalty

Examining Total Orders and Favorite Meal for repeat users revealed:

- A significant number of users consistently order their favorite dishes, demonstrating strong dish loyalty.

- Users with higher session ratings are more likely to place repeat orders, emphasizing the importance of session quality.

Visualizations

1. **Popular Dishes:** A bar chart highlighting the top dishes, showcasing their frequency of orders.

2. **Orders by Age:** A line plot visualizing the total orders by different age groups, revealing patterns in demographic engagement.

Business Recommendations

1. Enhance Dinner Offerings

Since dinner sessions dominate order trends, the business should:

- Expand the dinner menu with dishes similar to top-performing meals like Spaghetti and Grilled Chicken.

- Offer promotions targeting dinner times, such as discounts for group orders.

2. Target Younger and Older Demographics

To engage underrepresented age groups:

- Introduce meals catering to younger users, such as trendy or budget-friendly options.

- Offer senior-friendly promotions, focusing on smaller portions and nutritional value.

3. Improve Customer Retention

To capitalize on user loyalty:

- Provide exclusive perks for frequent users, such as reward points for repeat orders of their favorite dishes.

- Enhance session experiences by focusing on quick delivery and consistent meal quality.

4. Marketing Strategies

- Leverage the popularity of top dishes in advertising campaigns, promoting them as "customer favorites."

- Use age-specific insights to tailor marketing efforts, such as targeted ads for users aged 28-42.

Conclusion

This analysis highlights valuable trends and opportunities to improve user engagement and business performance. By focusing on enhancing dinner offerings, targeting specific demographics, and leveraging user loyalty, the business can achieve significant growth and customer satisfaction. The findings and recommendations should serve as a foundation for strategic planning and operational improvements.

The merged dataset and visualizations supporting these insights have been saved as Merged_Data.csv and included in the project repository for further reference