Analytics Summary Report

Name – Shruti Gajendra Bonde

E-mail – shrutibonde2003@gmail.com

Batch – Data Engineer

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The following insights are derived from exploratory data analysis (EDA) conducted on the recipe dataset. The dataset includes recipe metadata, ingredient lists, user interactions, ratings, and cooking difficulty levels.

Each insight below highlights an **observed pattern**, followed by **interpretation** and **real-world meaning**.

Insight 1: Most Common Ingredients

Interpretation

- **Salt** and **Potato** appear in 80% of all recipes, making them foundational ingredients in this dataset.
- Common Indian spices such as **Cumin Seeds, Red Chilli Powder, and Coriander Powder** make up the rest of the top ingredients.

What This Means

- The dataset heavily represents **Indian home-cooking**, where these ingredients are ubiquitous.
- Recipes are likely simple, daily-use dishes rather than Western or gourmet cuisines.
- This insight can help build **ingredient-based recommendations**, grocery lists, or recipe clustering.

Insight 2: Average Preparation Time

Average Prep Time: 19.1 minutes

Interpretation

- Most dishes in the dataset can be prepared in **under 20 minutes**.
- Indicates that the collection focuses on **quick recipes**, suitable for beginners or daily cooking.

What This Means

- Users may prefer recipes requiring less time, aligning with modern cooking habits.
- You can recommend “Quick 20-minute meals” based on this insight.

Insight 3: Recipe Difficulty Distribution

Interpretation

- Nearly **half (45%)** of all recipes are Easy.
- Hard recipes form the smallest group (20%).

What This Means

- The dataset is designed for **beginner and intermediate cooks**.
- The majority of users likely prefer simple, fast-prep recipes.
- Useful for UI decisions like default sorting by “Easy recipes first.”

Insight 4: Correlation — Prep Time vs. Likes

Correlation Value: 0.1786 (Mild positive)

Interpretation

- Recipes with longer preparation times tend to receive **slightly more likes**, although the effect is weak.
- Users may associate **effort with better taste**, but it's not a strong pattern.

What This Means

- Prep time is not a major driver of popularity.
- Other factors (ingredients, name, flavor profile, presentation) may influence likes more.

Insight 5: Top 5 Most Viewed Recipes

Interpretation

- **Masala Rice** and **Recipe R003** are the most viewed, indicating high user interest.
- These recipes likely have familiar ingredients, simple preparation, or strong flavor profiles.

What This Means

- These high-traffic recipes can be highlighted as **"Trending Recipes"**.
- Further study may reveal patterns behind what makes a recipe popular.

Insight 6: Common Ingredients in High-Rated Recipes (Avg Rating ≥ 4.0)

Interpretation

- Ingredients like **Potato, Rice**, and basic spices appear frequently in recipes rated 4.0+.
- These are comforting, familiar foods that users consistently enjoy.

What This Means

- Recipes using these ingredients may be more likely to receive higher ratings.
- This can help improve recipe suggestions and ingredient-based scoring.

Insight 7: Average Rating by Difficulty

Interpretation

- **Medium difficulty recipes** have the highest average rating.
- Hard recipes have the lowest rating, possibly due to:
    - Longer steps
    - More effort
    - Higher chances of mistakes

What This Means

- Users appreciate moderately challenging recipes with good outcomes.
- Hard recipes may need improved instructions or step clarity.

Insight 8: Average Number of Steps per Recipe

Average Steps: 5.1 steps

Interpretation

- Recipes are concise, typically having 4–6 steps.
- Aligns with the overall theme of **simple, beginner-friendly cooking**.

What This Means

- This supports fast cooking workflows.
- Good for UI layouts focusing on short instructions.

Insight 9: Top 5 Most Active Users (Based on Interactions)

Interpretation

- These users engage the most—viewing, liking, or attempting recipes.
- They represent your **core power users**.

What This Means

- You can target them for:
    - Early feature testing
    - Surveys
    - Reward/loyalty programs
    - Personalized recommendations

Insight 10: Recipes with at Least One Cook Attempt

95% of recipes (19 out of 20) have at least one cook attempt.

Interpretation

- Users are actually trying the recipes, not just viewing them.
- Indicates high recipe quality and trust in the platform.

What This Means

- The recipe content is actionable and easy to follow.
- There is strong engagement beyond simple browsing.

Insight 11: Most Liked Recipe (Unique Users)

Interpretation

- Recipe R005 resonates most with users.
- Likely due to:
    - Familiar ingredients

    - Good flavor
    - Balanced difficulty
    - Attractive name or image

What This Means

- This recipe can be highlighted as:
    - *"Community Favorite"*
    - *"Most Loved Recipe"*
- Useful for homepage recommendations.

Final Summary

The analytics findings reveal that:

- Users prefer **easy and quick recipes**
- Familiar ingredients (potato, rice, basic spices) dominate high ratings
- Medium difficulty recipes surprisingly score best
- Engagement is strong, with 95% recipes attempted
- A handful of recipes attract significantly more views and likes
- A small group of active users drives most interactions

These insights can guide **recipe recommendation systems, app UI design, user targeting strategies, and content creation**.