NUTRI SCAN

Smart Food Recognition and Intelligent Nutrition Assistance System

1. User Profile Management

- Collects user details:
    - Name
    - Age
    - Gender
    - Weight
    - Height
    - BMI levels
    - Health issues / medical reports
- Used for personalized nutrition analysis and recommendations

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2. Food Image Scanning

- User captures or uploads food image
- YOLO-based model scans the image
- Automatically identifies:
    - Food item name
    - Multiple food items (if present)

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3. Nutrition Identification

- Extracts nutritional values:
    - Calories
    - Proteins
    - Carbohydrates
    - Fats
    - Vitamins
    - Minerals
- Fetches data from trusted nutrition databases

4. Nutrition Visualization

- Displays nutrition information using:
    - Pie charts
    - Graphs
    - Summary tables
- Helps users easily understand food composition

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5. Nutrition Evaluation

- Compares nutrients with RDA standards
- Identifies:
    - Low nutrients
    - Balanced nutrients
    - Excess nutrients
- Provides suggestions on:
    - Which nutrients to increase
    - Which nutrients to reduce

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6. Personalized Diet Plan

- Generates diet plans based on:
    - User profile
    - Nutritional deficiency or excess
    - Location-based food availability
- Ensures practical and region-specific diet recommendations

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7. Location-Based Recommendations

- Uses user location (with permission)
- Suggests foods available in the user's region. (state)

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8. Daily Nutrition Report

- Tracks food images uploaded throughout the day
- Generates end-of-day report:

- o Total calories consumed

- o Nutrient balance

- o Health insights

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9. Cooking Recipe Suggestions

- User enters available raw food items

- System suggests healthy cooking recipes(Any 20 recipes)

- Encourages home cooking using available ingredients

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10. User History & Data Storage

- Stores:

  - o User profile details

  - o Food image history

  - o Nutrition reports

  - o Diet plans

- Enables long-term tracking and analysis