Dite management system

Personalized Nutrition Based on BMI and Food Intake

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Project Motivation

- Rising helth concerns due to poor diet choices
- Need for personalized recommendations on bmi
- Goal:help users understand deficiencies and improve their nutration

Tech stack

- Backend: Python, Flask
- Frontend: HTML, CSS (via render_template)
- Data: Excel dataset with nutrient values
- Libraries: Pandas, NumPy

Dataset Overview

- Source: perfect_dataset_for_my_project.xlsx
- Contains:
  - Food items
  - Nutrient values (Calories, Proteins, Iron,potatium Calsium,sugars,vitamins etc.)

BMI Calculation

- **Formula: BMI = weight / (height in meters)^2**
- **Categories:**
  - **Underweight**
  - **Normal**
  - **Overweight**
  - **Obese**
- **Visual: BMI chart or gauge**

Nutrient Requirements by BMI

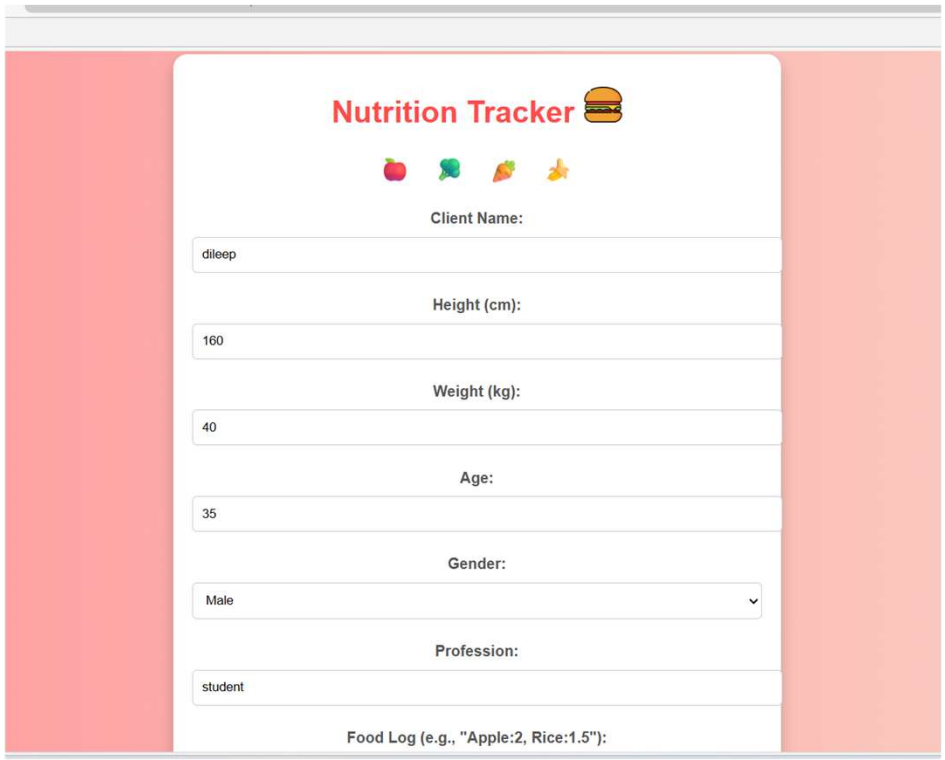
- Table comparing nutrient targets for each BMI category
- Highlight differences in Calories, Proteins, Sugars, etc

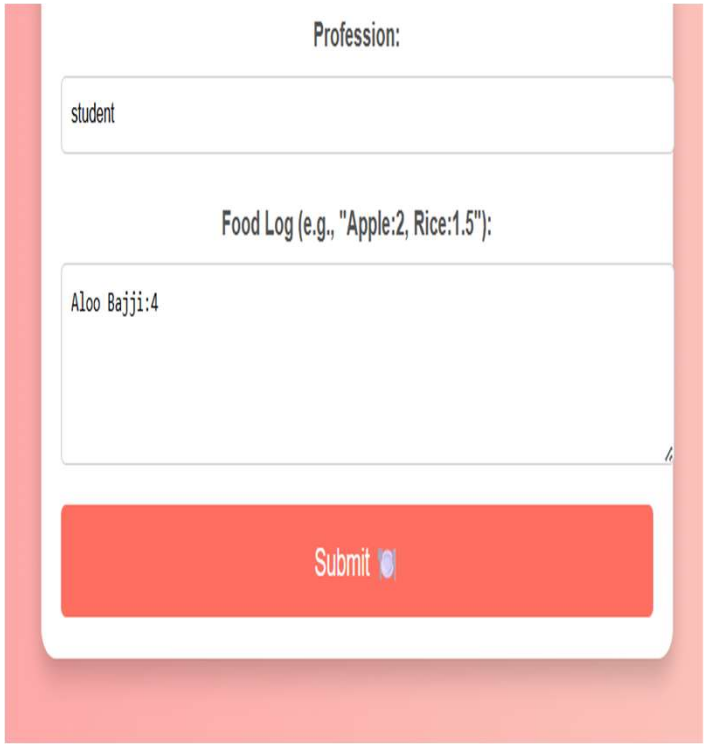
User input flow:-

*Name,age,gender,height,weight,profession

*Foodlog(e.g,”Rice:2”,apple:1”)

Application Interface

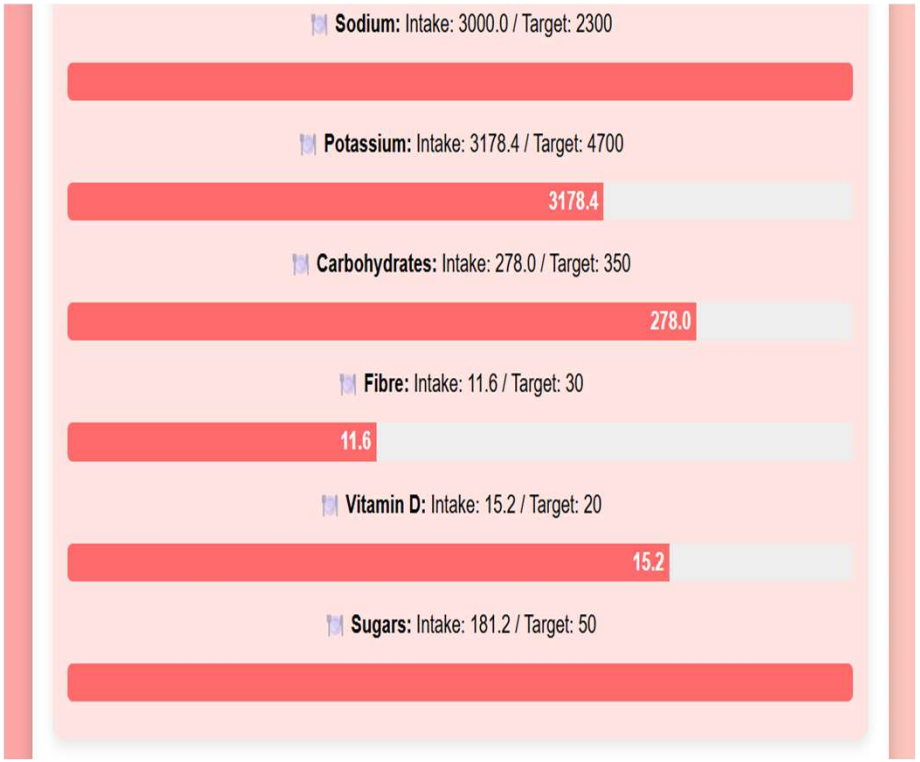




Nutrient Deficiency & Recommendations (Combo Slide)

- Deficiency Detection
  - Compares user intake vs. BMI-based targets
  - Highlights gaps in nutrients like Iron, Calcium, Vitamin D
- Smart Recommendations
  - Suggests top 3 foods per deficient nutrient
  - Based on dataset values and user needs
- 📊 Visual: One example table showing Iron deficiency and
- recommended foods

Deficiencies :-



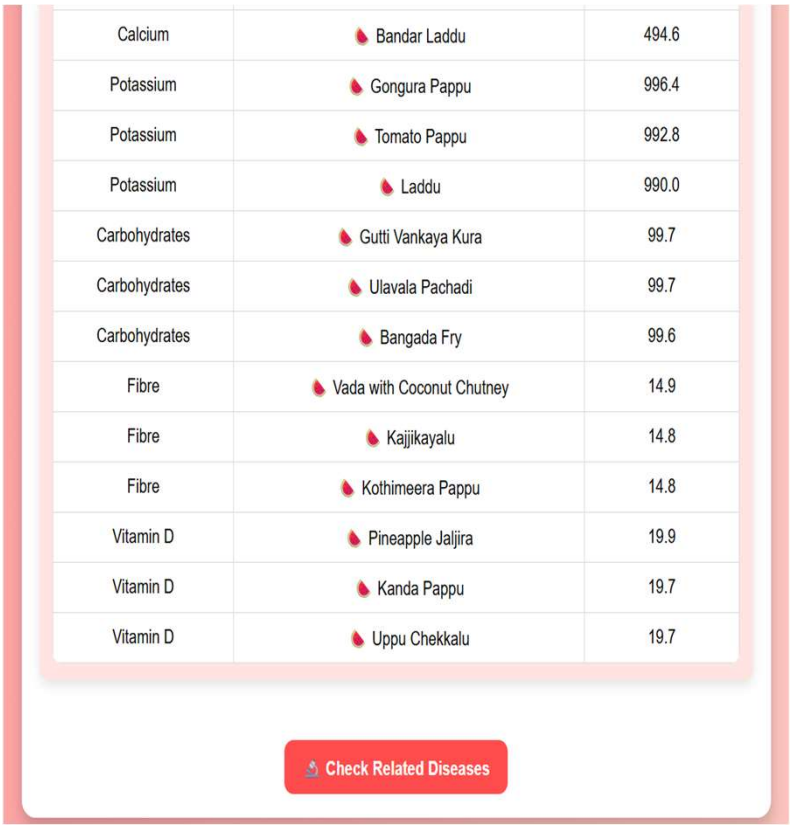
Web Interface & Output

- **User Flow**
  - **Input form → BMI calculation → Nutrient analysis → Food sugg**
- **Templates Used**
  - **index.html for input**
  - **results.html for output**

Food recommendations based on Deficiencies

Food Recommendations

Nutrient	Food Item	Content
Calories	Samosa	598.2
Calories	Vanjaram Fry	594.3
Calories	Rasam Rice	594.1
Proteins	Dry Prawns Chutney	50.0
Proteins	Kokum Juice	49.9
Proteins	Rava Laddu	49.8
Calcium	Egg Pulusu	499.7
Calcium	Spicy Crab Soup	495.5
Calcium	Bandar Laddu	494.6
Potassium	Gongura Pappu	996.4
Potassium	Tomato Pappu	992.8
Potassium	Laddu	990.0
Carbohydrates	Gutti Vankaya Kura	99.7
Carbohydrates	Ulavala Pachadi	99.7
Carbohydrates	Bangada Fry	99.6



Calcium	Bandar Laddu	494.6
Potassium	Gongura Pappu	996.4
Potassium	Tomato Pappu	992.8
Potassium	Laddu	990.0
Carbohydrates	Gutti Vankaya Kura	99.7
Carbohydrates	Ulavala Pachadi	99.7
Carbohydrates	Bangada Fry	99.6
Fibre	Vada with Coconut Chutney	14.9
Fibre	Kajjikayalu	14.8
Fibre	Kothimeera Pappu	14.8
Vitamin D	Pineapple Jaljira	19.9
Vitamin D	Kanda Pappu	19.7
Vitamin D	Uppu Chekkalu	19.7

Check Related Diseases

Challenges & Future Scope

- Challenges
  - Matching food entries with dataset
  - Handling invalid inputs gracefully
- Future Enhancements
- User login & history
- Mobile app version
- Multilingual support for wider reach

Conclusion:-

- **Recap of goals: Personalized diet guidance using BMI and food logs**
- **Impact: Helps users make informed, healthier choices**
- **🙏 Thank You**