


Smart Food Recommendation System for Health

A screenshot of a web application interface for a 'Smart Food Recommendation System for Health'. The interface has a dark theme. At the top, there is a logo of a bowl of fruit and the title 'Smart Food Recommendation System for Health'. Below the title, a subtitle reads 'This app suggests whether a food is good or bad for a given health condition.' There are three main input sections: 'Select your health condition:' with a dropdown menu currently showing 'Anemia'; 'Enter a food item:' with a text input field; and three buttons: 'Check Recommendation', 'Suggest Healthy Foods', and 'Show Food Chart'. A black wavy line connects the icon of the hands holding the heart to the 'Check Recommendation' button.

 **Smart Food Recommendation System for Health**

This app suggests whether a food is good or bad for a given health condition.

Select your health condition:

Anemia

Enter a food item:

Check Recommendation

Suggest Healthy Foods

Show Food Chart

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THE PROBLEM STATEMENT

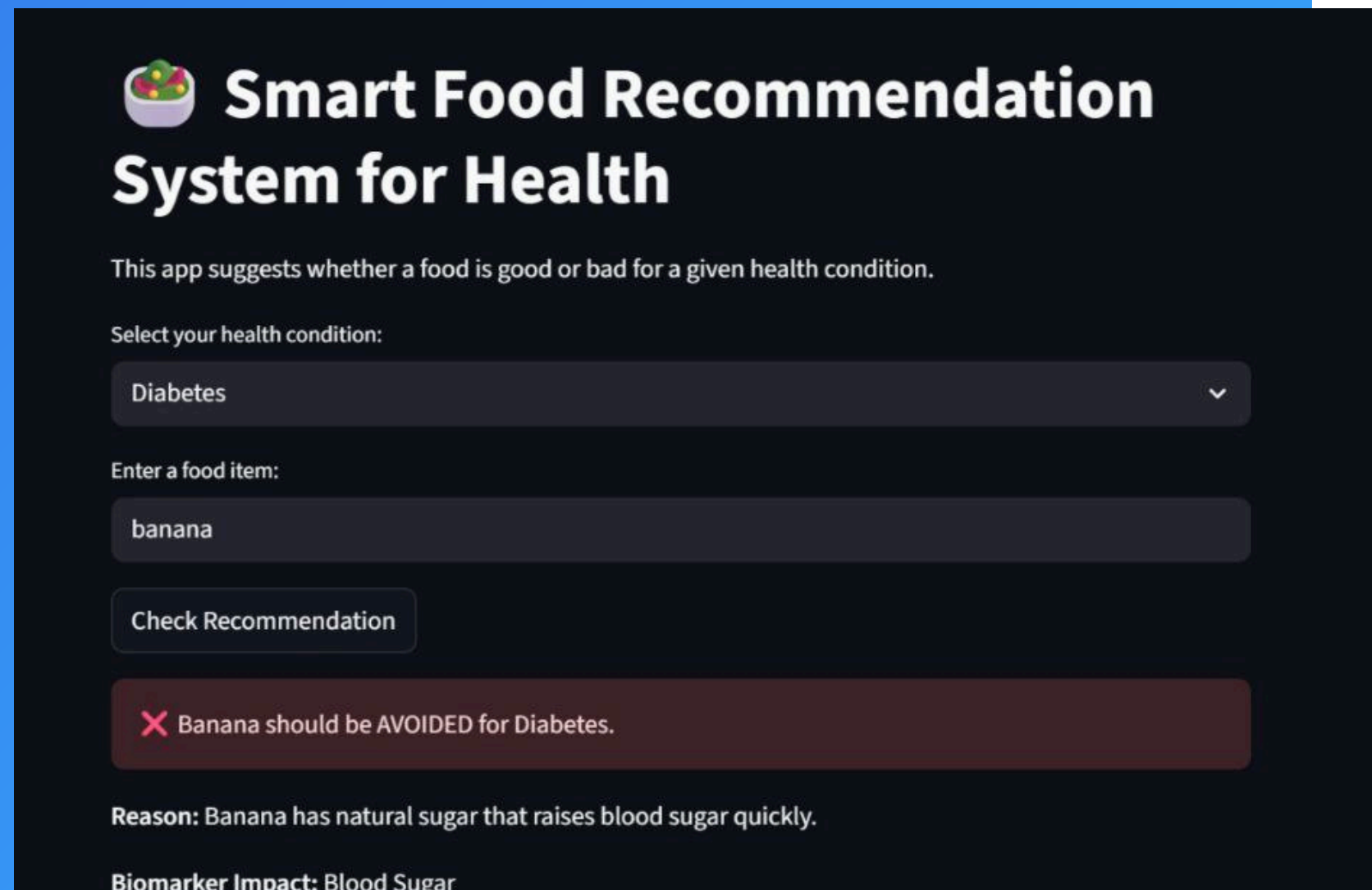
- Build a Smart Language Model (SLM) or rule-based system trained on datasets of good and bad food items for various diseases (e.g., diabetes, hypertension, thyroid disorders, obesity).
- The system allows a user to:
 1. Input their health conditions or diseases.
 2. Query food items to understand whether they are recommended or should be avoided.
 3. Receive explanations on why a particular food is good or bad for their condition and which biomarkers will be improved from that food.
- The goal is to help users easily discover disease-specific dietary guidelines in a conversational, intuitive manner.


CONTEXT & IMPACT

- **Chronic diseases like diabetes, hypertension, obesity, and thyroid disorders are heavily influenced by diet.**
- **People often struggle to identify foods that are healthy or harmful for their specific condition.**
- **Personalized dietary guidance can improve health outcomes and reduce the risk of complications.**
- **A data-driven recommendation system empowers users to make smarter, informed food choices.**
- **Impact: Enables proactive disease management and promotes healthier lifestyles through easy-to-understand, disease-specific dietary advice.**



OUR SOLUTION



 **Smart Food Recommendation System for Health**

This app suggests whether a food is good or bad for a given health condition.

Select your health condition:

Diabetes

Enter a food item:

banana

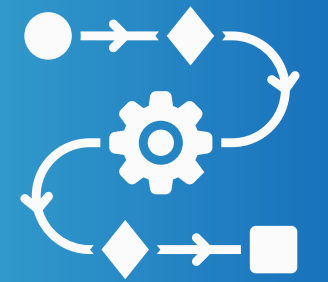
Check Recommendation

✗ Banana should be AVOIDED for Diabetes.

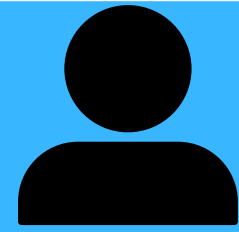
Reason: Banana has natural sugar that raises blood sugar quickly.

Biomarker Impact: Blood Sugar

- Provides personalized food recommendations based on a user's health condition.
- Can be rule-based or powered by a Smart Language Model (AI).
- Supports multiple diseases like diabetes, hypertension, thyroid disorders, obesity.
- Conversational interface makes dietary guidance intuitive and easy to follow.
- Empowers users to make informed, disease-specific dietary choices quickly.



HOW IT WORKS



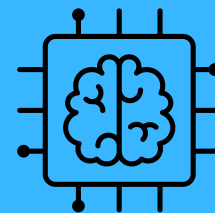
User Input

User enters health conditions and dietary preferences



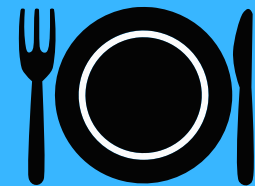
Data Lookup

System checks curated datasets of good and bad foods for the condition.



Recommendation Engine

Engine generates personalized food suggestions based on rules or AI analysis

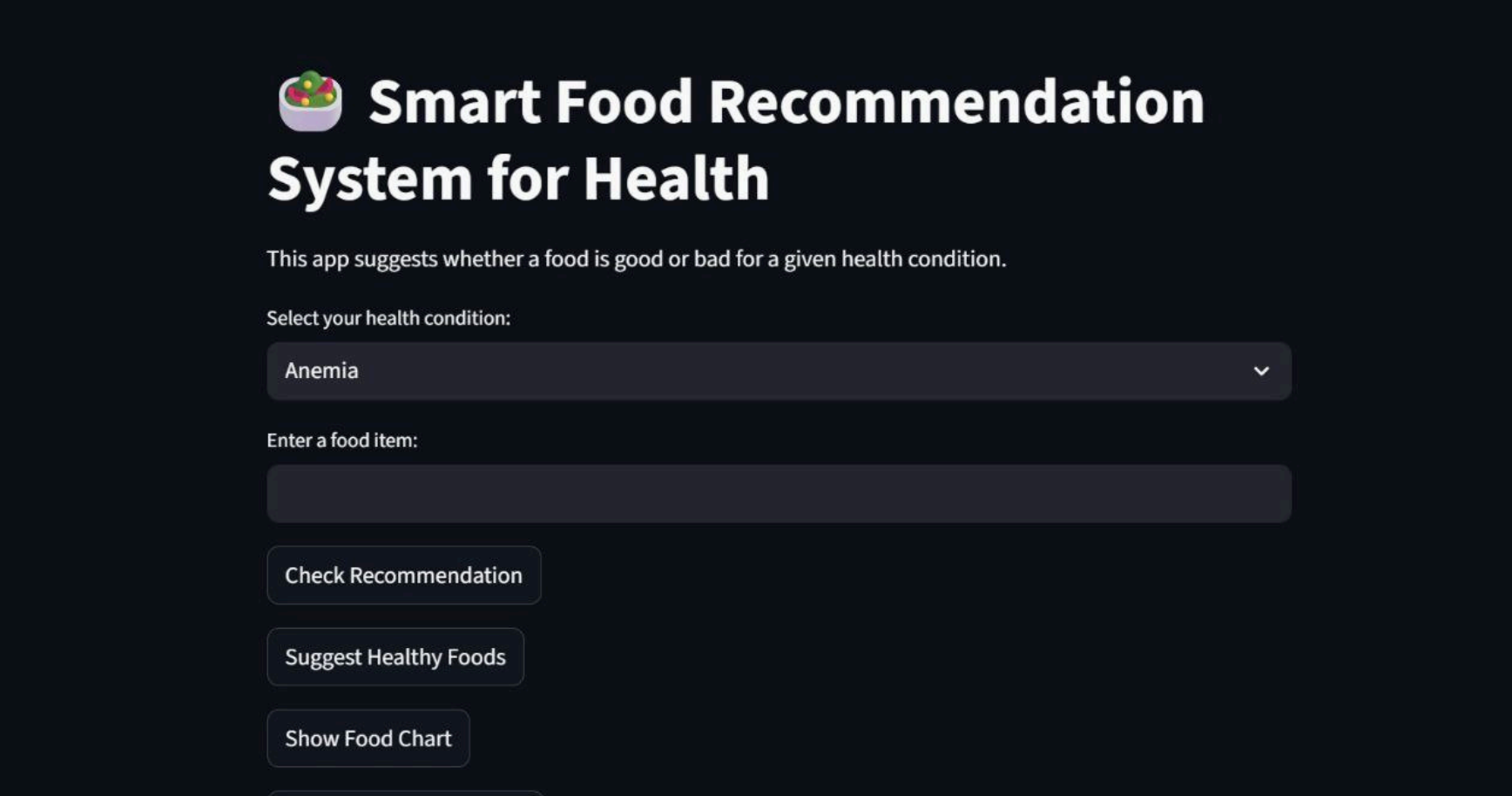



User Output

Provides intuitive, disease-specific dietary guidance in conversational format

LIVE APP DEMO

- **Interactive Interface:** Users can input their health conditions easily.
- **Instant Recommendations:** System provides personalized dietary suggestions immediately.
- **Disease-Specific Guidance:** Recommendations are tailored for conditions like diabetes, hypertension, thyroid disorders, and obesity.
- **User-Friendly:** Clean, conversational layout for effortless navigation.



 **Smart Food Recommendation System for Health**

This app suggests whether a food is good or bad for a given health condition.

Select your health condition:

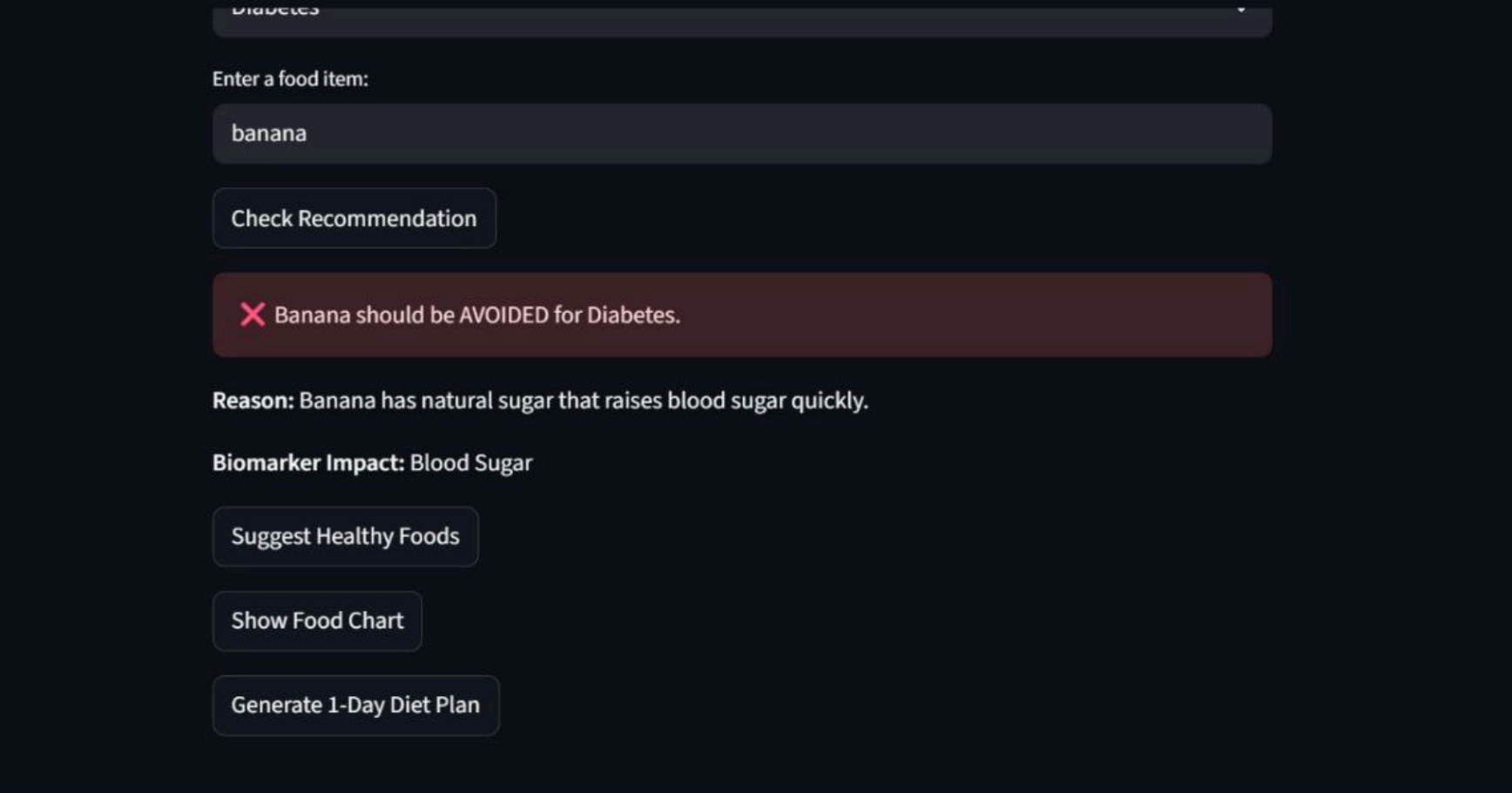
Anemia

Enter a food item:

Check Recommendation

Suggest Healthy Foods

Show Food Chart



Diabetes

Enter a food item:

banana

Check Recommendation

✗ Banana should be AVOIDED for Diabetes.

Reason: Banana has natural sugar that raises blood sugar quickly.

Biomarker Impact: Blood Sugar

Suggest Healthy Foods

Show Food Chart

Generate 1-Day Diet Plan

TECH STACK

- Frontend: Streamlit – for interactive user interface
- Backend: Python – for processing and logic
- Data: Curated food-disease datasets for recommendations
- Model/Engine: Rule-based system or Smart Language Model (AI-driven)
- Version Control / Reference: GitHub –
<https://github.com/mohitaggarwal10940-ui/SMART-FOOD-RECOMMENDATION>




IMPACT & FUTURE WORK

Impact:

- Empowers Users: Helps make informed, disease-specific dietary choices.
- Improves Health Outcomes: Supports proactive management of chronic conditions.
- Promotes Awareness: Educates users about foods that are beneficial or harmful for their health.

Future Work:

- Expand Disease Coverage: Include more conditions and dietary requirements.
 - Enhanced Analytics: Add nutritional charts, tracking, and progress reports.
 - Gamification: Motivate users with goals and rewards for healthy eating.
 - Expert Collaboration: Integrate guidance from dietitians and medical professionals.
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THANK YOU
FOR WATCHING