SmartEats

Your personalized calorie and nutrition advisor

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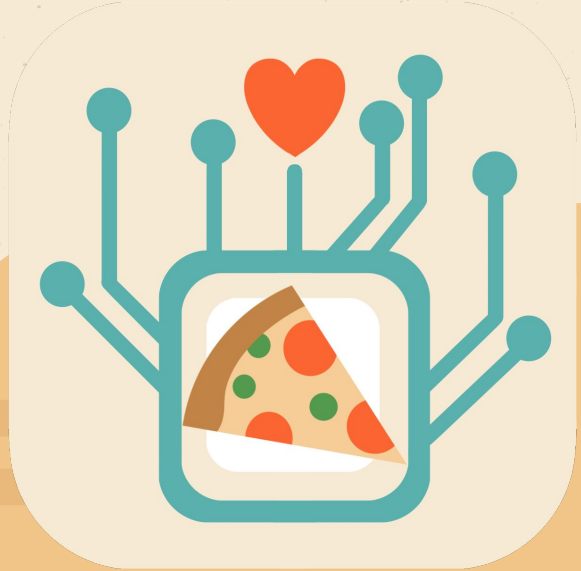


Table of contents

Problem & Solution 01

Market Opportunity 02

Key Product Value 03

04 Application Mockups

05 Tech Stack

06 Growth Potential

Problem Statement & Proposed Solution

PROBLEMS

Tracking food intake can be challenging and time-consuming

Lack of awareness about how daily dietary choices impact long-term health

Difficulty in identifying balanced and healthy meal options based on individual dietary needs

SOLUTIONS

Instant food recognition, making calorie counting and nutrition tracking easy

Links nutritional components to potential long-term health outcomes, helping users make more informed dietary choices

Provides personalized dietary recommendations, including healthier meal alternatives and recipes

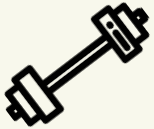
Market Opportunity

Health-conscious individuals

People looking to proactively manage their nutrition, weight and wellness.

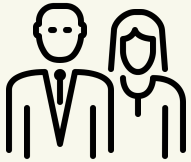
People with Dietary Restrictions

Individuals with specific dietary needs, such as allergies or intolerances.



Fitness Enthusiasts and Athletes

Focused on performance, this group can track macronutrients and calories to align their diet with fitness goals.



Parents and Caregivers

Concerned about providing nutritious meals for their loved ones.

Tech-Savvy Users

Those who enjoy exploring new digital tools and leveraging mobile technology for life management.

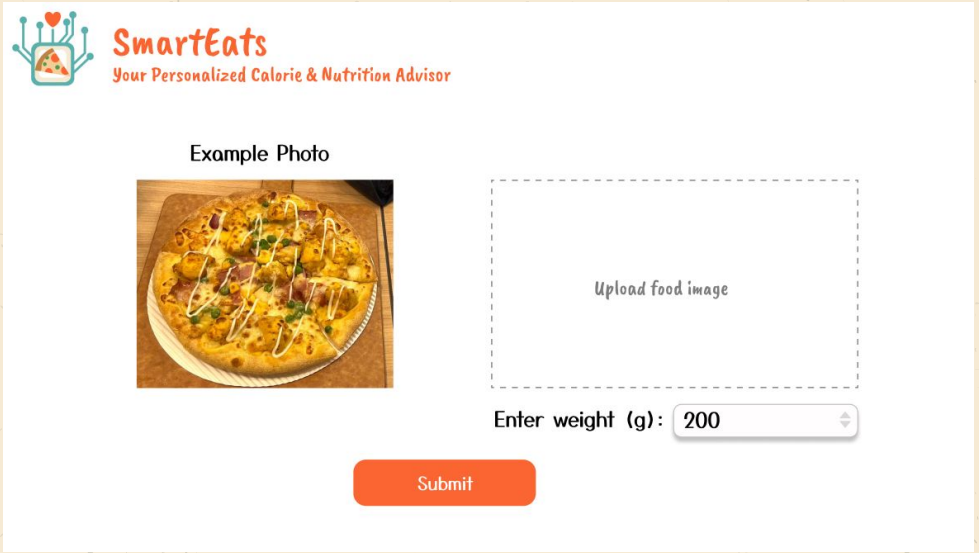
Unique Value Proposition

Features	Our Application	Other Companies
Food recognition	✓	✓
Calories & nutrition counting	✓	✓
Disease prediction	✓	✗
Meals logging	✓	✓
Personalized dietary suggestions	✓	✗

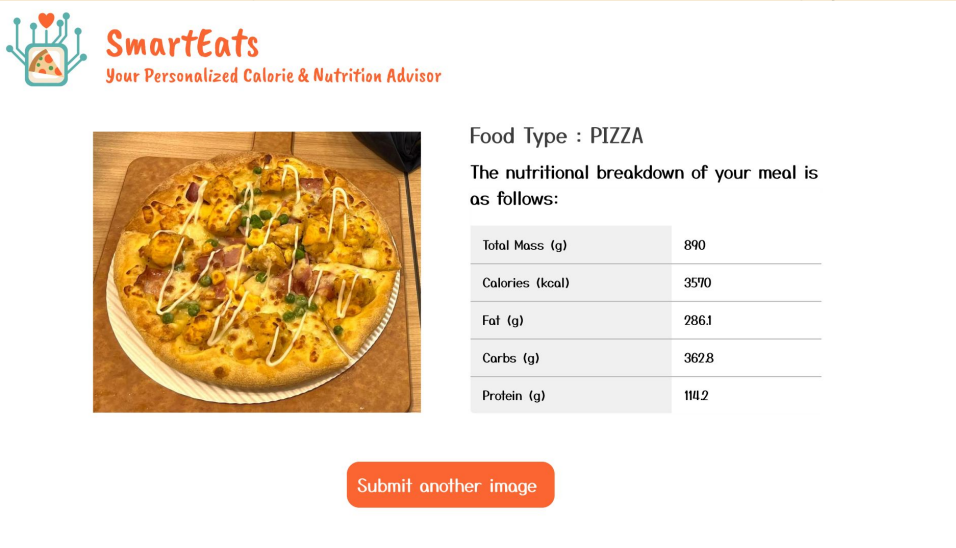
Application Features

Effortless Meal Tracking

Simply take a picture of your meal and upload it! SmartEats will do the rest.



Application Features



Detailed Nutritional Insights

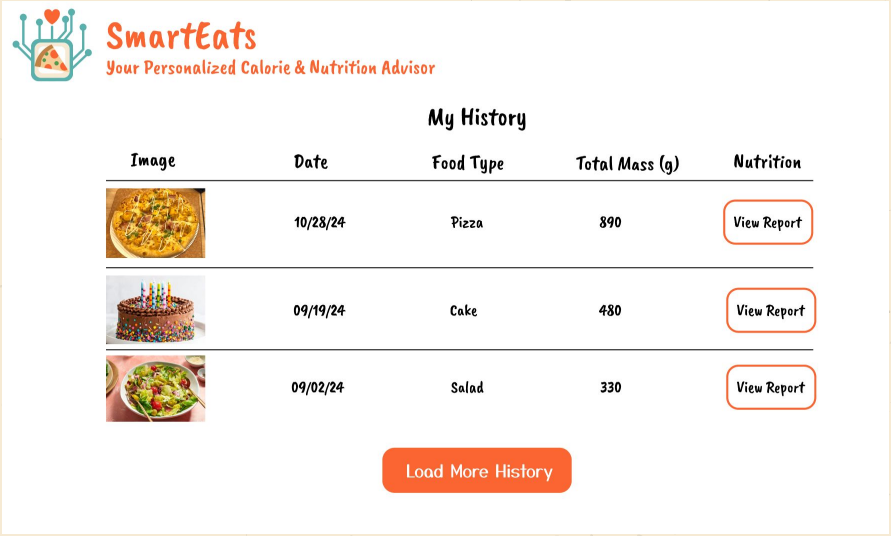
kcal

Provides an accurate calorie count and macronutrient breakdown of your meal.

Application Features

Personalized History Tracking

View past meals along with their nutritional data, helping you monitor long-term habits.



Application Features

Personalized meal plans

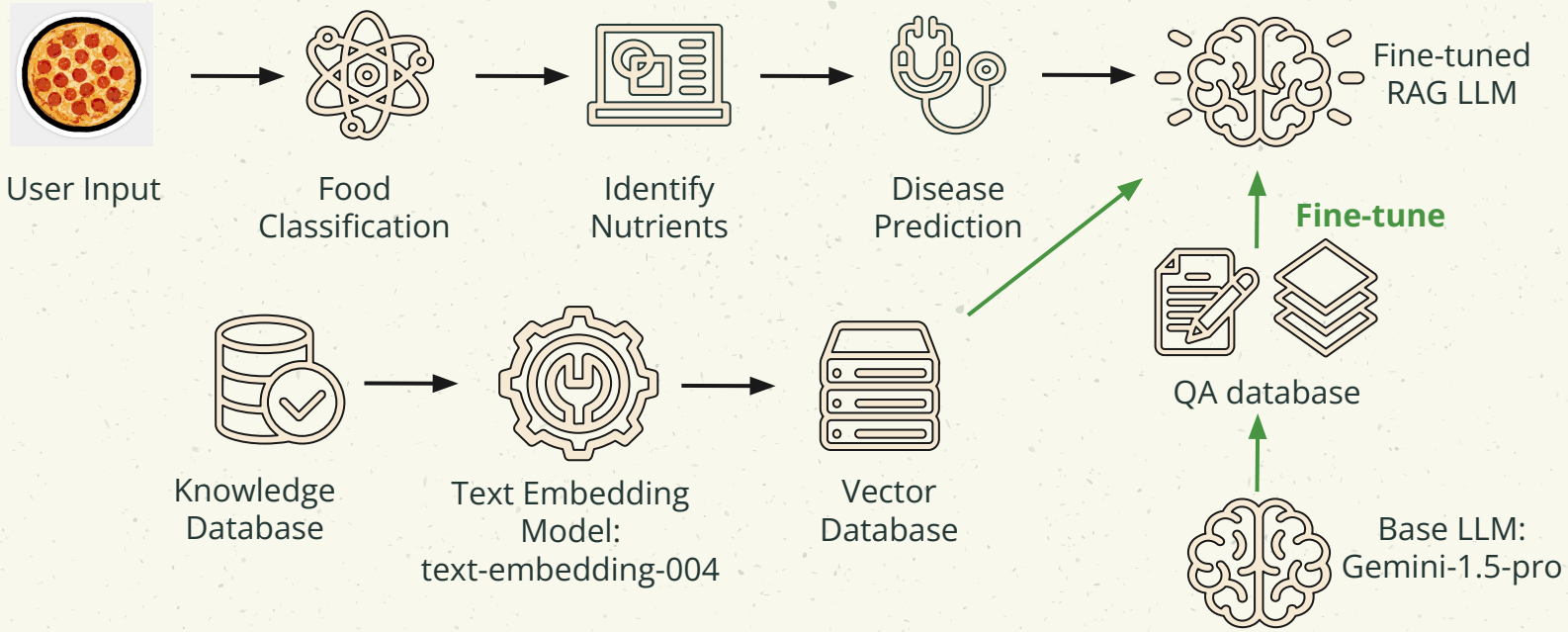
Goal & Progress tracking

Recipe database

Community & Social

More is coming up...

Tech Stack



Technologies used: Docker, GCP, DVC, Vertex AI

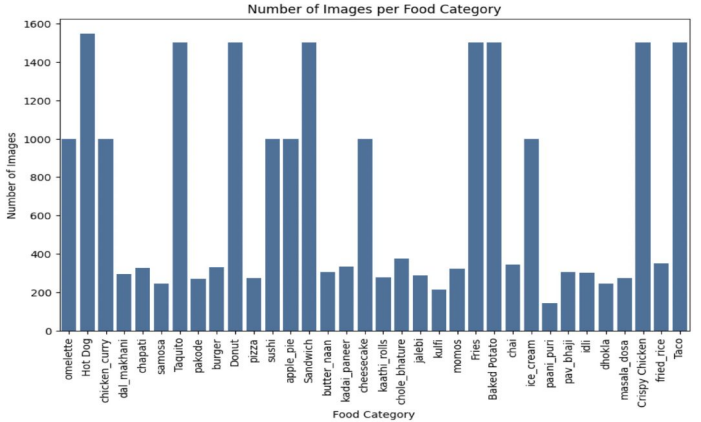
Tech Stack

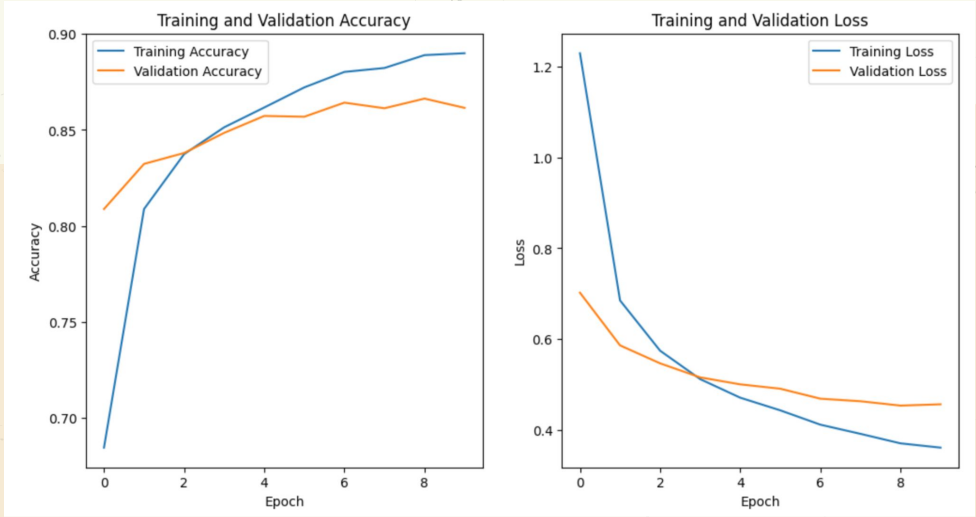
User Input

Food Classification

Fine-tuning EfficientNet model

Accuracy: **89%**





Tech Stack

User Input

Food Classification

Identify Nutrients

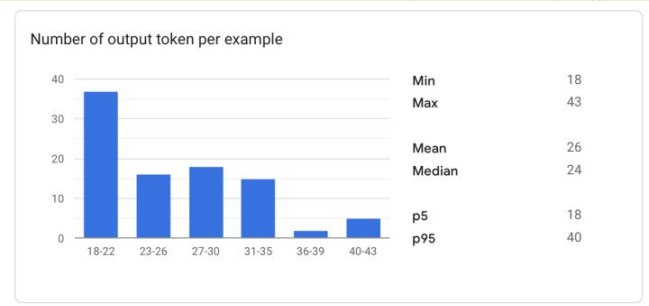
Disease Prediction

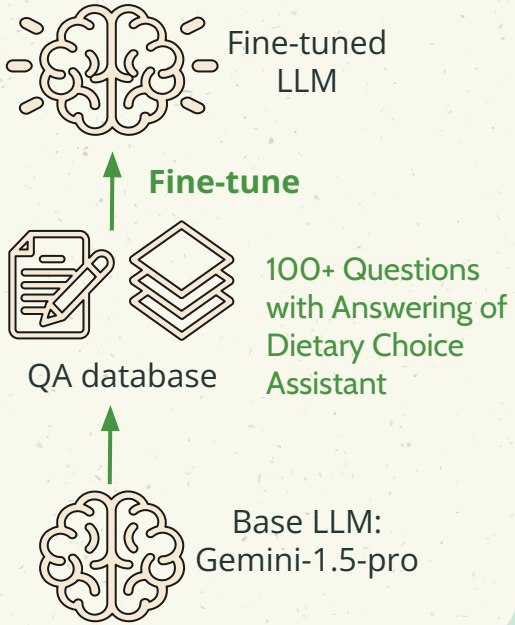
USDA FoodData Central API

Data: National Health and Nutrition Examination Survey (NHANES)

Model: XGBoost

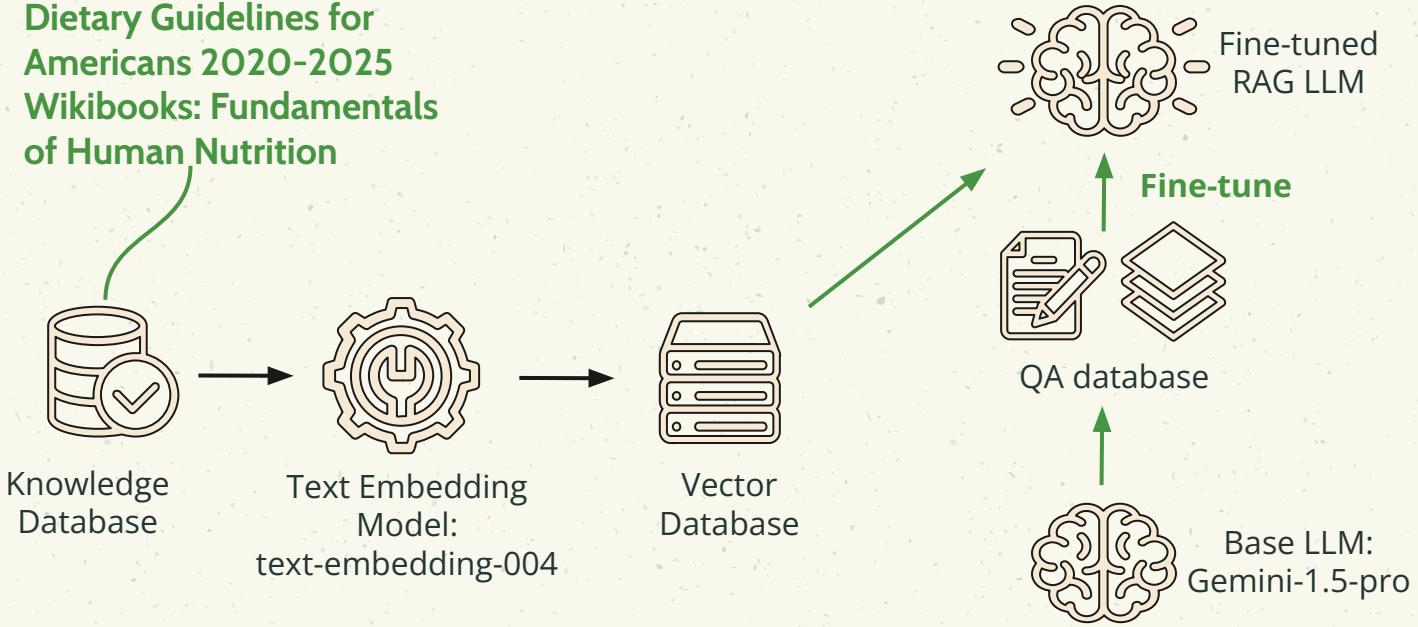
Large Language Model + Fine-tuning





RAG

- **Dietary Guidelines for Americans 2020-2025**
- **Wikibooks: Fundamentals of Human Nutrition**



Further Tech Development

Model

- Involve multimodal model: Llama-3.2-11B-Vision or from Gemini
- Advance multi-vector embedding in RAG

Database

- Incorporate more food **image** datasets
- Incorporate more **QA** datasets for LLM fine-tuning

User Interface

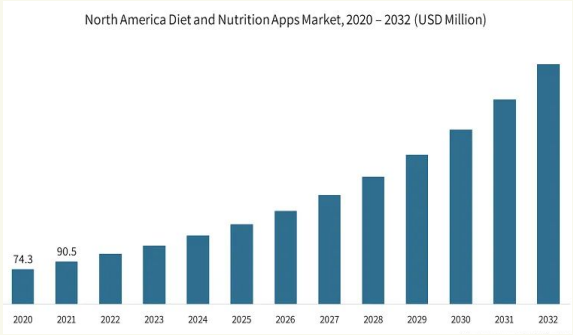
- Implement ChatBot
- User Login

Scalability: GCP deployment

Growth Potential

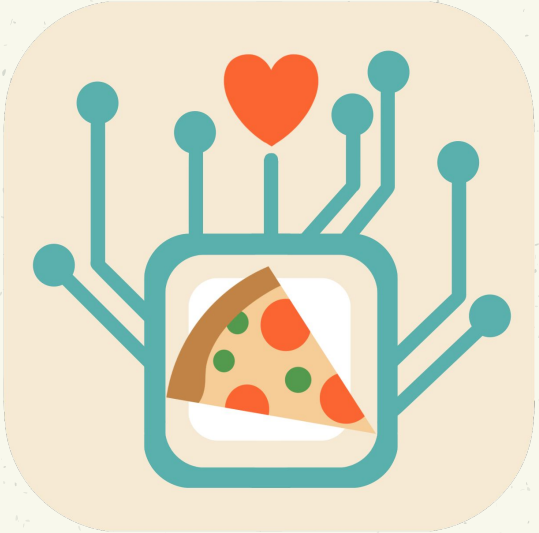
Key Trends

1. Increasing Health Awareness
2. Rise in Diet-Related Health Issues
3. Enhancement of personalized experiences with gen AI



Our Strategy

1. Integration Opportunities: Integrate with wearables and health-tracking devices to provide a more holistic view of users' health.
2. Community and Social Features: Enable recipe sharing and goal-tracking with friends to boost user growth and engagement.
3. Localization: Adapt to cultural dietary habits and languages for global expansion.



Thank you

We are SmartEats

**Welcome questions,
suggestions and discussions!**