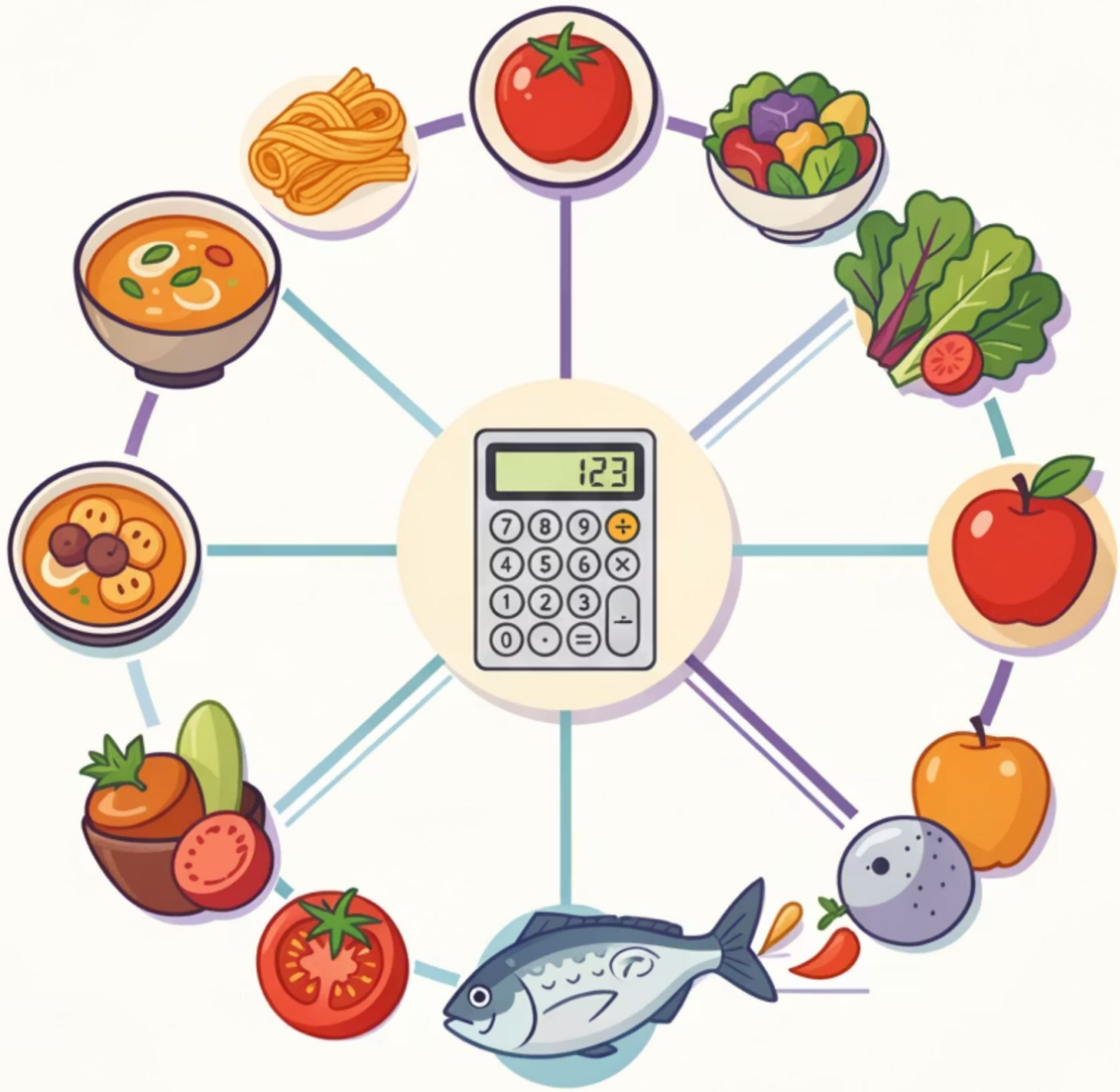
NutriGraph

Agentic Multimodal RAG for High-Precision Nutritional Auditing



The Nutritional Transparency Challenge

For Diners

- Limited transparency in restaurant food
- No easy way to compare nutritional fit

For Restaurants

- High effort to produce nutrition data
- Lack of technical expertise & tools

For the Ecosystem

- Fragmented, non-standard dish data
- Trust issues from opaque calculations

Our Dual-Sided Solution

Nutrition Builder (Restaurant Side)

Empowering restaurants to generate accurate nutritional profiles.

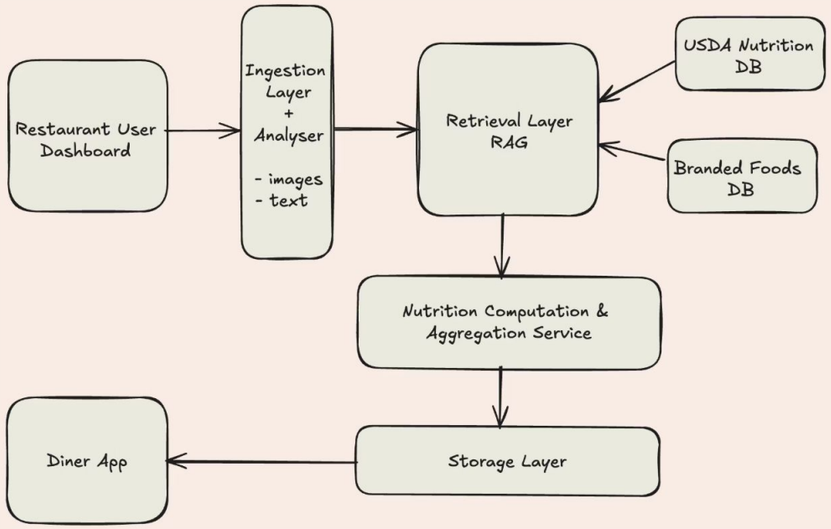
- Create nutritional catalogs from ingredients and quantities.
- Automated follow-up for brand & source details.
- Leverages USDA and OpenFoodFacts databases.

Nutrition Explorer (Diner Side)

Providing diners with personalized, verified nutritional insights.

- Browse & log dishes with verified nutrition data.
- Compcapabilities

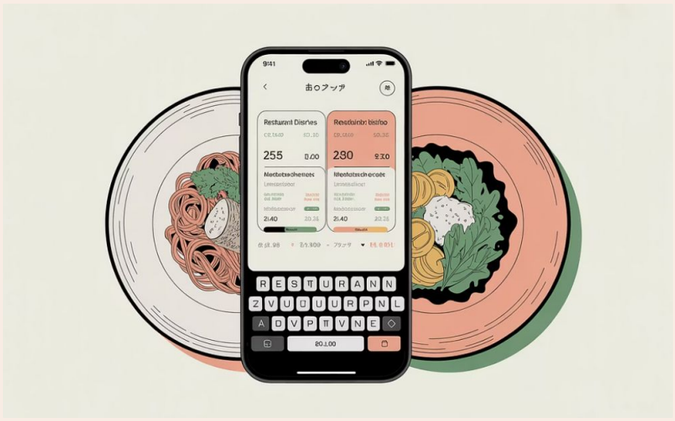
System Architecture



Intuitive User Interface

Dish Detail View

Comprehensive nutritional breakdown at a glance.



Restaurant Comparison

Effortlessly compare options for optimal dietary fit.

Personalized Tracking

Log meals and track progress towards health goals.

Expanding Our Knowledge Base

USDA & OpenFoodFacts

Core nutritional data for foundational ingredient analysis.

Online LLMs/AIs

Accessing broader knowledge and advanced reasoning capabilities

Evaluation Methodology

Ground Truth Comparison

- AI-generated macros will be benchmarked against a "Gold Standard" set of 50 dishes with known nutritional values (via lab testing or strict recipe calculation).

Metric - Mean Absolute Error (MAE)

- MAE will be calculated for calories, protein, carbs, and fat between AI predictions an

Agent Efficiency

- Questions to Convergence will be measured—the number of follow-up questions needed before reaching >95% confidence threshold.
- Lower is better.

User Experience

- Usability testing with diners and restaurant staff.
- Feedback loops for continuous improvement.