



A scenic coastal landscape featuring a rugged coastline with dark, craggy rocks and patches of green vegetation, including several pine trees. The sea is a vibrant turquoise-blue, with white-capped waves crashing against the rocks. In the background, a dense forest of tall evergreen trees covers a hillside, and a small, distant building is visible through the trees. The sky is a clear, pale blue.

Health Cleo

Project Overview and Objectives

- Origin: Stemming from a personal journey
- Goal: To streamline the lives of individuals with food sensitivities (intolerance and allergy)
- Targets:
 - a. Interpret and standardize diverse food intolerance and allergy assessments
 - b. Deliver immediate, precise product evaluations
 - c. Address language obstacles for international adventurers



Problem Definition

- Medical reports can differ across laboratories.
- Reports can be overwhelming with extensive information, including over 100 food items.
- Recognizing and understanding product labels can be challenging due to language barriers, especially for travellers from diverse countries.
- Personal nutritionists can be costly, ranging from approximately \$100 to \$200 per session.
- Lack of real-time product analysis tools.

CLINICAL BIOCHEMISTRY

| TEST DESCRIPTION | | RESULT | UNITS | REFERENCE RANGES | |
|------------------|-------------|-------------------------|--------|------------------|-------------|
| | | ALLERGY FOOD VEG REPORT | | | |
| Dals | Result | Dals | Result | Dals | Result |
| Toor Dal | 0.17 | Chana Dal | 0.35 | Urad Dal | 0.25 |
| Moong Dal | 0.24 | Rajma Dal | 0.23 | | |
| Fruits | Result | Fruits | Result | Fruits | Result |
| Orange | 0.37 | Straw Berry | 0.36 | Apple | 0.11 |
| Melon | 0.11 | Mango | 0.18 | Banana | 0.14 |
| Pear | 0.13 | Lemon | 0.17 | Pumpkin | 0.62 |
| Grape | 0.22 | | | | |
| Milk Products | Result | Milk Products | Result | Milk Products | Result |
| Milk | 0.13 | Curd | 0.12 | Butter | 0.25 |
| Cheese | 0.63 | Ghee | 0.39 | | |
| Nuts | Result | Nuts | Result | Nuts | Result |
| Hazel Nut | 0.29 | Ground Nut | 0.38 | Almond | 0.11 |
| Coconut | 0.39 | Wal nut | 0.19 | | |
| Others | Result | Others | Result | Others | Result |
| Salt | 0.23 | Sugar | 0.30 | Tea | 0.29 |
| Coffee | 0.27 | Vinegar | 0.31 | Yeast | 0.65 |
| Tobacco | 0.12 | | | | |
| Spices | Result | Spices | Result | Spices | Result |
| Cinnamons | 0.36 | Garlic | 0.33 | Ginger | 0.20 |
| Elachi | 0.14 | Poppy | 0.33 | Black Pepper | 0.63 |
| Cloves | 0.11 | | | | |
| Starch Food | Result | Starch Food | Result | Starch Food | Result |
| | | | | | |

TESTS ASKED : FOOD INTOLERANCE PROFILE

| Foods | Value | Foods | Value | Foods | Value | Foods | Value |
|----------------------|-------|------------------|-------|----------------|-------|----------------------|-------|
| Casein | 141 | Caviar | <15 | Lentil | <15 | Raspberry | <15 |
| Millet | 130 | Cayenne | <15 | Lettuce | <15 | Razor Clam | <15 |
| Egg Yolk | 90 | Celery | <15 | Lime | <15 | Redcurrant | <15 |
| Barley | 55 | Chard | <15 | Liquorice | <15 | Rhubarb | <15 |
| Monkfish | 50 | Cherry | <15 | Lobster | <15 | Rice | <15 |
| Perch | 46 | Chestnut | <15 | Lychee | <15 | Rocket | <15 |
| Pear | 40 | Chicken | <15 | Macadamia Nut | <15 | Rosemary | <15 |
| Mint | 28 | Chickpea | <15 | Mackerel | <15 | Rye | <15 |
| Bean (Broad) | 24 | Chicory | <15 | Malt | <15 | Saffron | <15 |
| Almond | 23 | Chilli (Red) | <15 | Mango | <15 | Sage | <15 |
| Cola Nut | 22 | Cinnamon | <15 | Marjoram | <15 | Salmon | <15 |
| Cashew Nut | 16 | Clam | <15 | Marrow | <15 | Sardine | <15 |
| Agar Agar | <15 | Clove | <15 | Milk (Buffalo) | <15 | Scallop | <15 |
| Alga Espaguette | <15 | Cockle | <15 | Milk (Cow) | <15 | Sea Bream (Gilthead) | <15 |
| Alga Spirulina | <15 | Couscous | <15 | Milk (Goat) | <15 | Sea Bream (Red) | <15 |
| Alga Wakame | <15 | Coconut | <15 | Milk (Sheep) | <15 | Sesame Seed | <15 |
| Aloe Vera | <15 | Cod | <15 | Mulberry | <15 | Shallot | <15 |
| Alpha-Lactalbumin | <15 | Coffee | <15 | Mushroom | <15 | Sole | <15 |
| Amaranth | <15 | Coriander (Leaf) | <15 | Mussel | <15 | Soya Bean | <15 |
| Anchovy | <15 | Corn (Maize) | <15 | Mustard Seed | <15 | Spelt | <15 |
| Aniseed | <15 | Couscous | <15 | Nectarine | <15 | Spinach | <15 |
| Apple | <15 | Crab | <15 | Nettle | <15 | Squid | <15 |
| Apricot | <15 | Cranberry | <15 | Nutmeg | <15 | Strawberry | <15 |
| Artichoke | <15 | Cucumber | <15 | Oat | <15 | Sunflower Seed | <15 |
| Asparagus | <15 | Cumin | <15 | Octopus | <15 | Sweet Potato | <15 |
| Aubergine | <15 | Cuttlefish | <15 | Olive | <15 | Swordfish | <15 |
| Avocado | <15 | Date | <15 | Onion | <15 | Tangerine | <15 |
| Banana | <15 | Dill | <15 | Orange | <15 | Tapioca | <15 |
| Barnacle | <15 | Duck | <15 | Ostrich | <15 | Tarragon | <15 |
| Basil | <15 | Durum Wheat | <15 | Ox | <15 | Tea (Black) | <15 |
| Bass | <15 | Eel | <15 | Oyster | <15 | Tea (Green) | <15 |
| Bayleaf | <15 | Egg White | <15 | Papaya | <15 | Thyme | <15 |
| Bean (Green) | <15 | Fennel (Leaf) | <15 | Parsley | <15 | Tier Nut | <15 |
| Bean (Red Kidney) | <15 | Fig | <15 | Partridge | <15 | Tomato | <15 |
| Bean (White Haricot) | <15 | Flax Seed | <15 | Pea | <15 | Transglutaminase | <15 |

REPORT

SAMPLE COLLECTED AT :

REF. No. : **00000000000000000000000000000000**

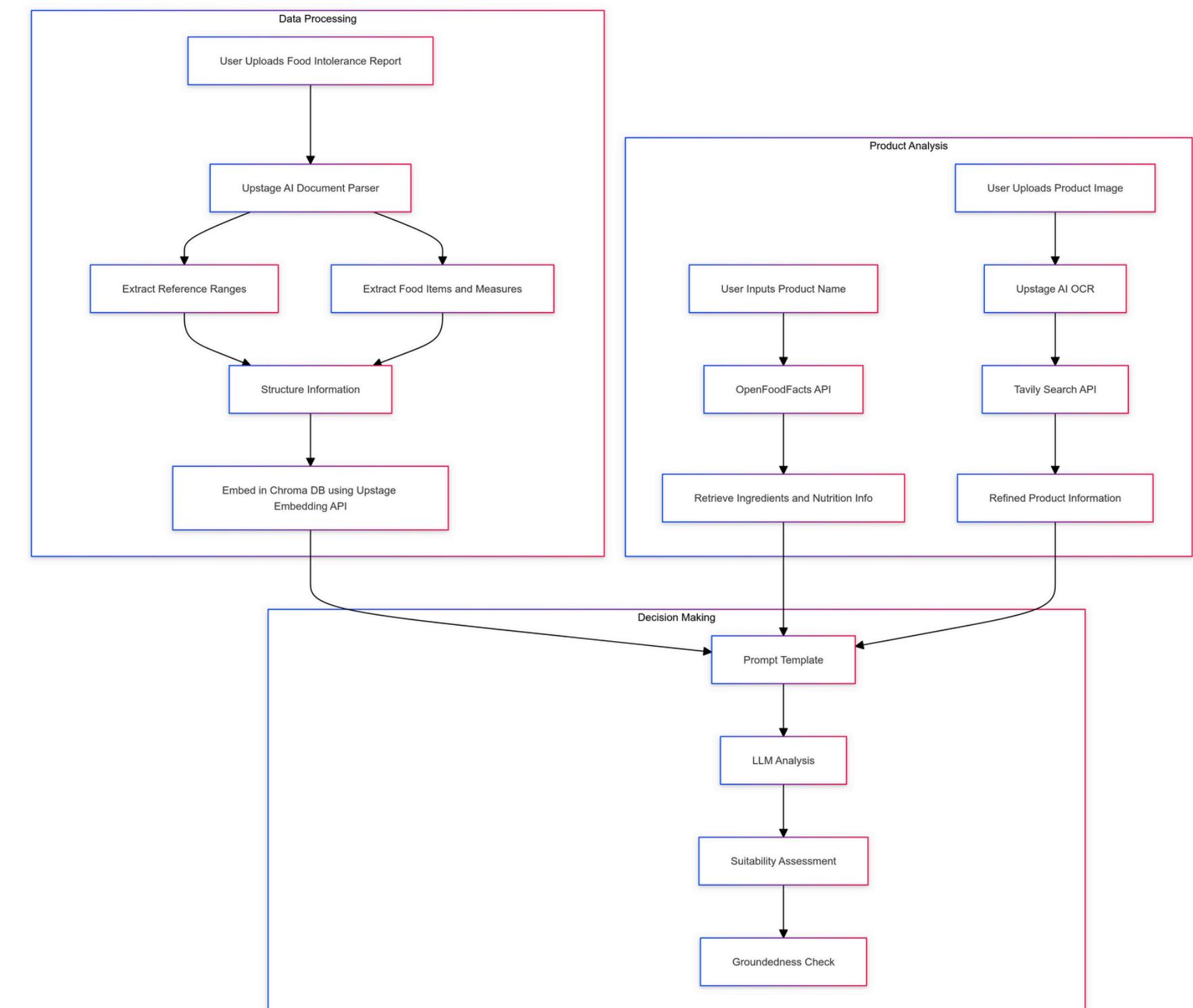
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Our Solution

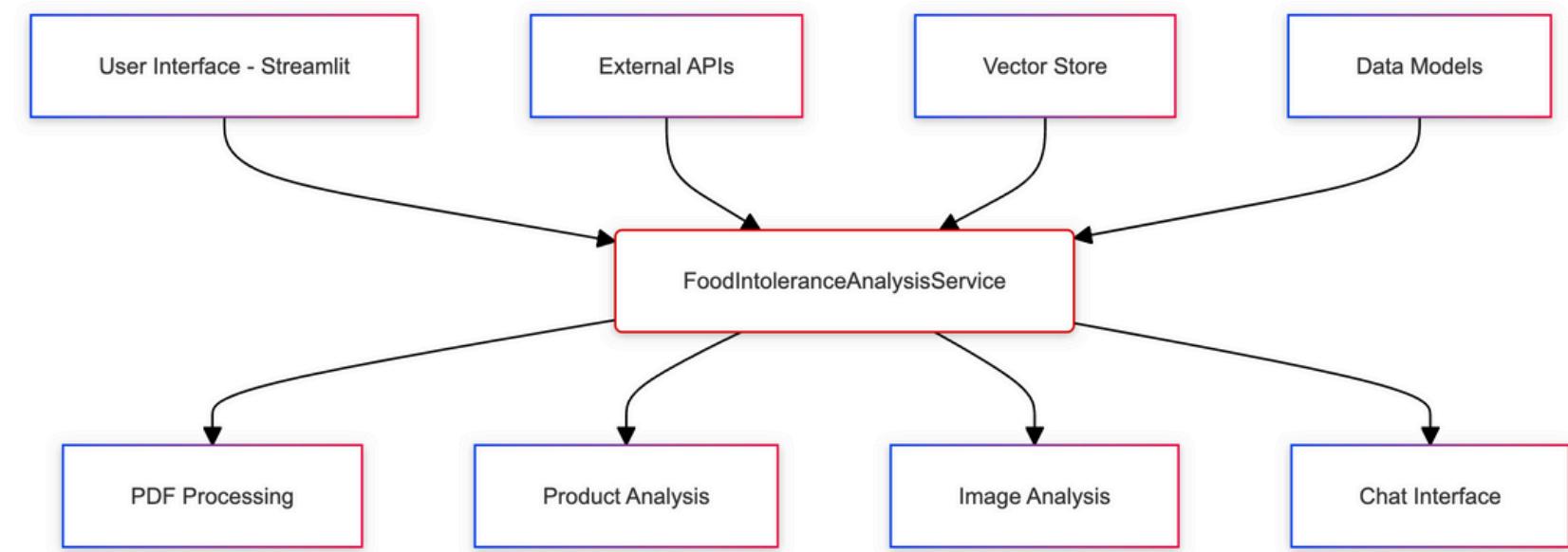
An AI-driven application that:

1. Can interpret various formats of food intolerance reports(future food allergy too)
2. Generates customized dietary profiles
3. Assesses food items instantly
4. Gives suggestions for safe eating
5. Features multilingual assistance



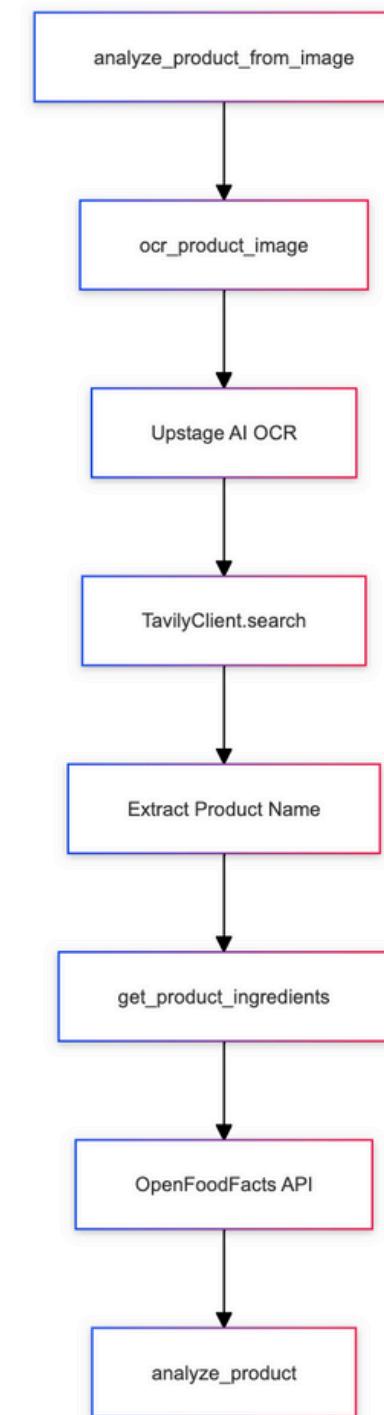
Main Features

- Universal Report Parsing
 - Manages diverse formats, reference ranges, and measurement units
- Personalized Dietary Profiling
 - Generates individual intolerance profiles based on parsed reports
- Real-Time Product Analysis
 - Provides immediate ingredient evaluation and safety suggestions
- Multilingual Support
 - Translates product details and recommendations
- Reliability Checks
 - Conducts credibility assessments to avoid AI misinterpretations



Technical Characteristics

- Makes use of Upstage AI's range of APIs
- Applies advanced prompt engineering and RetrievalQA techniques
- Uses vector databases to retrieve information effectively
- Combines OCR and web search for thorough product analysis
- Utilizes chunking strategies to manage extensive documents
- Connects with external databases such as OpenFoodFacts



Upstage API Utilization

- Document parsing and OCR for report analysis
- Language models for intelligent query processing
- Embedding models for efficient information retrieval
- Translation capabilities for multilingual support
- Groundedness checks to ensure information reliability

Upload and Analyze

Upload Food Intolerance Report (PDF)

Drag and drop file here
Limit 200MB per file • PDF

Browse files

A110.pdf 215.6KB

Select Analysis Type

Text Input

Image Upload

Enter product name

Nutty Muesli - By Sainsbury's

Analyze Product

Food Intolerance Analysis

PDF processed successfully!

Reference Range

| Elevated | Borderline | Normal |
|-----------|------------|-----------|
| > 30 U/mL | 24-30 U/mL | < 24 U/mL |

Food Items

| Name | Value (U/mL) | Category |
|----------------|--------------|----------|
| 0 BUFFALO MILK | 1 | Normal |
| 1 CASEIN | 74 | Elevated |
| 2 EGG WHITE | 61 | Elevated |
| 3 EGG YOLK | 0 | Normal |
| | 11 | Elevated |
| | 53 | Elevated |
| | 14 | Normal |

Analysis for Nutty Muesli - By Sainsbury's

Ingredients: Oat Flakes, Wheat Flakes, Dates (Dates, Rice Flour), Raisins (10%), Barley Flakes, Sunflower Seeds, Almonds (2%), Hazelnuts (2%), Pecan Nuts (2%). Cashew Nuts (2%), Brazil Nut Pieces (2%), Coconut, Pumpkin Seeds, Dried Apple.

Suitability:

Oat Flakes: Suitable

Wheat Flakes: Avoid

Barley Flakes: Avoid

Sunflower Seeds: Avoid

Coconut: Suitable

Pumpkin Seeds: Suitable

Dried Apple: Suitable



Innovation Highlights

- Creating a consistent method for diverse medical report formats
- Utilizing AI and external data for instant product analysis
- Incorporating various AI technologies (NLP, OCR, embedding)
- Designing with a user-centered approach for ease of use and accessibility
- Implementing a scalable architecture to accommodate future growth

Social Impact

- Enables individuals with food intolerances to make knowledgeable choices
- Minimizes the chances of negative reactions to food
- Simplifies and enhances safety when travelling with food intolerances
- Offers cost-effective access to nutritional advice
- Advocates for inclusivity in dining and social settings

Future Development Plans

- Connecting with wearable devices like Rabbit R1 and Humane AI pin and third-party e-commerce apps.
- Growing the food database to encompass a wider range of regional specialties
- Creating AR functionalities for in-store shopping support
- Adding more lab tests such as allergy reports
- Improving personalization through machine learning
- Partnering with food manufacturers to enhance product labeling

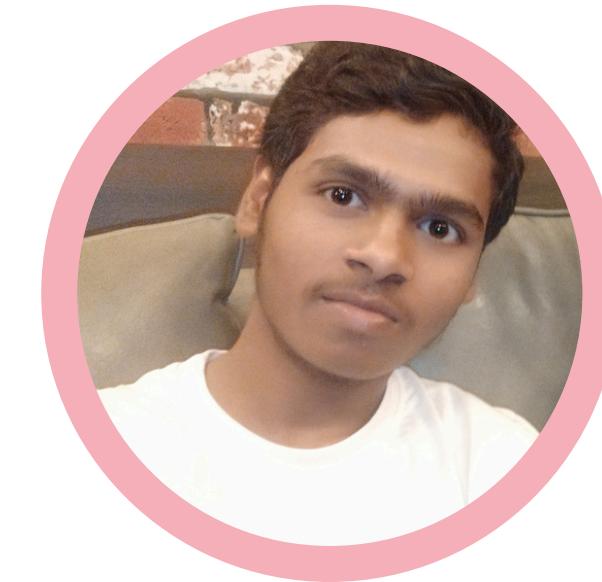


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Conclusion

Vision: "Revolutionizing personalized nutrition with AI"

Call to action: Join us in democratizing food safety

