Accenture Innovation Challenge

Harness Generative AI to develop innovative solutions that boost business and societal growth

Team Details

TEAM NAME : KATALYST

Spandan Salunkhe

- **College**: Indian Institue Of Technology Patna
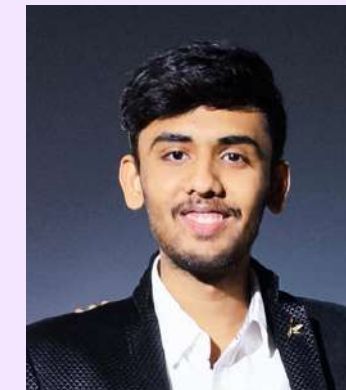- **Stream**: Electrical and Electronics Engineering
- **Year of Graduation**: 2026

S Akash

- **College**: Indian Institue Of Technology Patna
- **Stream**: Electrical and Electronics Engineering
- **Year of Graduation**: 2026

Shyam

- **College**: Indian Institue Of Technology Patna
- **Stream**: Electrical and Electronics Engineering
- **Year of Graduation**: 2026

Swayam Jain

- **College**: Indian Institue Of Technology Patna
- **Stream**: Electrical and Electronics Engineering
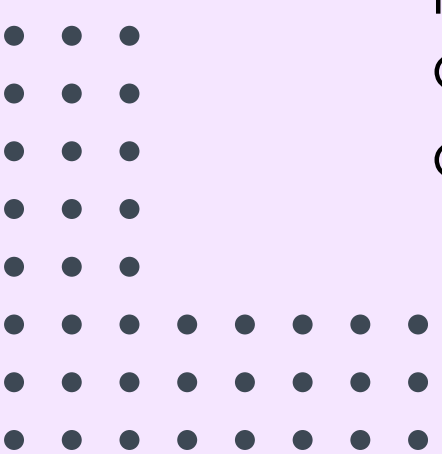- **Year of Graduation**: 2026
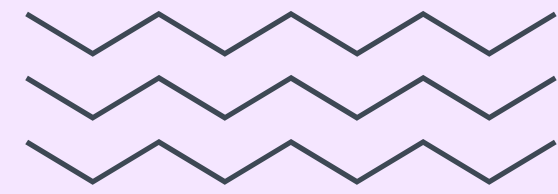
THE PROBLEM STATEMENT

Existing health and wellness solutions often operate in isolation, making it difficult for users to manage their overall health in a seamless, integrated way. People often face challenges when trying to find personalized dietary advice, smart grocery recommendations, and fitness routines that align with their goals—all within a single platform. For example, someone might use a fitness app for workouts, a separate platform for meal planning, and another service for grocery shopping, leading to confusion and inefficiencies.

Additionally, while gym-goers may track their workouts, they often struggle to connect their exercise routines with proper nutrition or grocery choices. Without a cohesive approach, it becomes difficult to ensure that one's diet supports fitness goals, resulting in missed opportunities for progress.

An all-in-one health platform that integrates exercise, nutrition, and smart grocery shopping would streamline users' experience, making it easier to follow personalized, goal-oriented plans. Such integration could help users make better food choices aligned with their fitness routines, track progress, and maintain consistency across their health journey. By bringing these elements together, consumers can experience more effective, well-rounded wellness management without the confusion of multiple, disconnected tools.
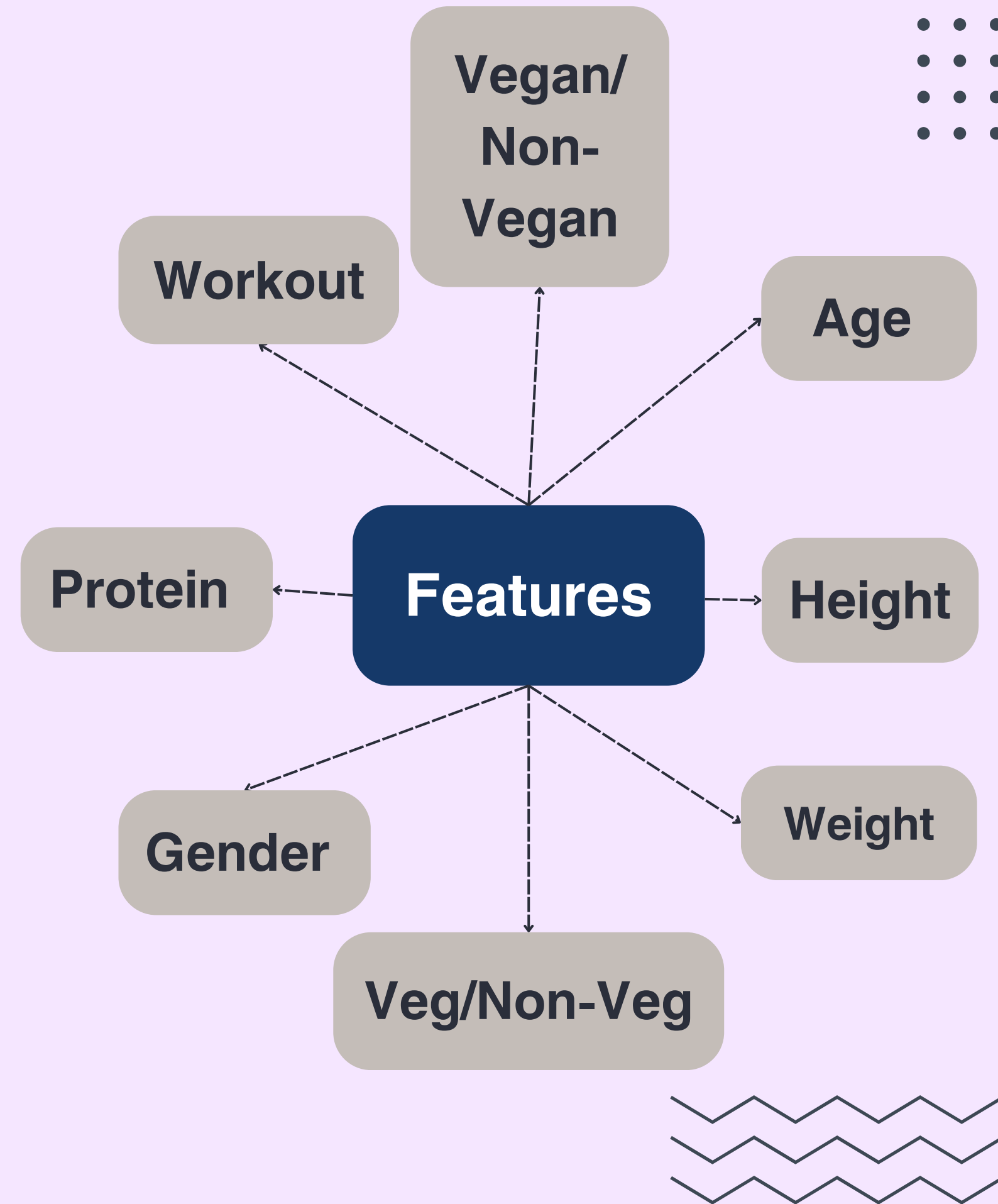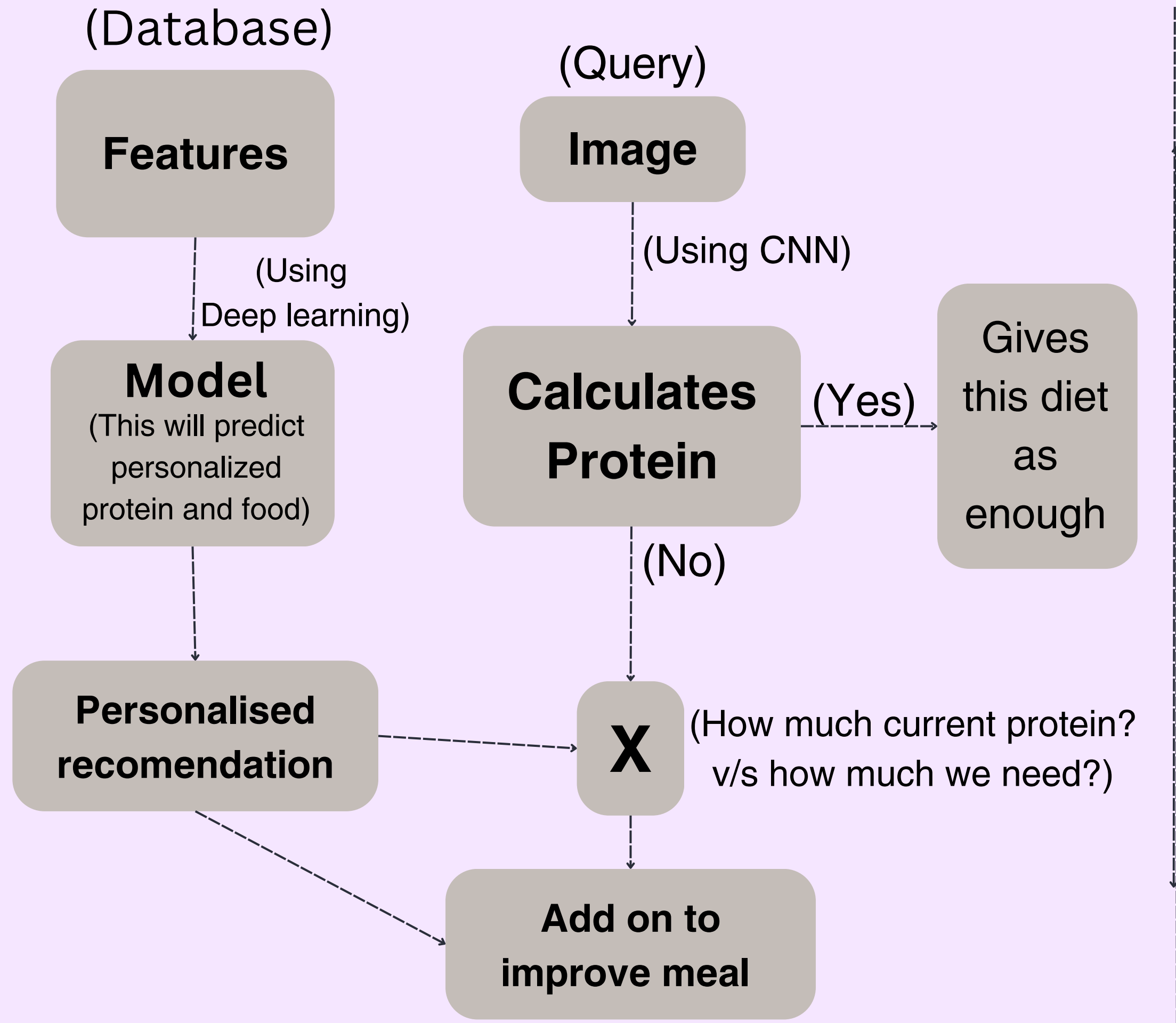
OUR SOLUTION

- The Health-Conscious Shopping Assistant (HCSA) is an AI-powered tool designed to help health-focused shoppers make informed decisions. By analyzing dietary preferences, fitness goals, and health conditions, HCSA offers personalized product recommendations and detailed nutrition information, whether shopping online or in-store. Users can easily input their preferences to receive insights into nutritional content, ingredient quality, and health benefits, ensuring that their selections align with their wellness goals.

- HCSA seamlessly integrates with fitness and meal-planning apps, providing a unified platform that connects grocery shopping with overall health management. This simplifies the process of maintaining a healthy lifestyle by combining dietary advice with fitness routines. With HCSA, shoppers can easily make choices that support both their nutrition and fitness goals, promoting a more holistic approach to wellness.

Prototype link: https://github.com/Akasxh/HCAS_Accenture

METHODOLOGY

(Database)

Features

(Using Deep learning)

Model
(This will predict personalized protein and food)

Personalised recomendation

(Query)

Image

(Using CNN)

Calculates Protein —— (Yes) ——→ Gives this diet as enough

(No)

X (How much current protein? v/s how much we need?)

Add on to improve meal

Features

- Workout
- Vegan/Non-Vegan
- Age
- Protein
- Height
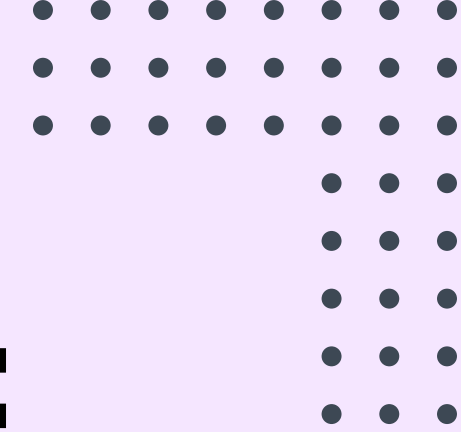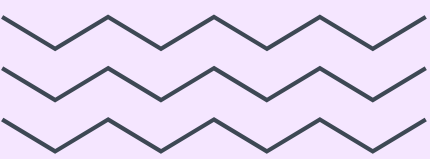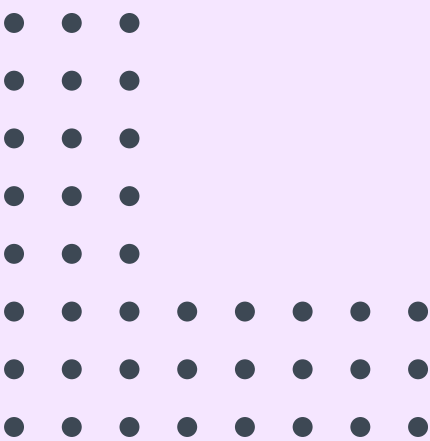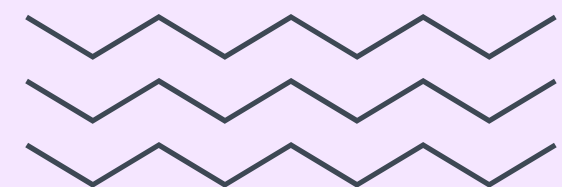- Gender
- Weight
- Veg/Non-Veg

IMAGE:

- Use of CNN to identify features of food .
- Labelling food and counting number of food items
- Calculating protein from this using linear search
- Total protein now in food

COMBINING BOTH MODELS O/P:

- How much more protein needed .
- Suggest items from existing personalised list of items

PERSONALIZATION:

- Using Deep learning architecture we train the model to give approximate protein intake needed.
- Suggest items , search and filter vegan/lactose if applicable

TECHSTACK:

- Tensorflow , CUDA acceleration , Jupyter, python 3.10 , pandas , numpy.

Video link: https://bit.ly/3XTevIU

ACCELERATING CHANGE THROUGH TECHNOLOGICAL INNOVATION

PERSONALIZED RECOMMENDATIONS

The Health-Conscious Shopping Assistant (HCSA) accelerates change by leveraging AI and data-driven technology to transform how consumers approach health, nutrition, and grocery shopping. By analyzing individual health profiles, dietary preferences, and fitness goals, the HCSA delivers personalized product recommendations, making it easier for shoppers to align their choices with their wellness needs.
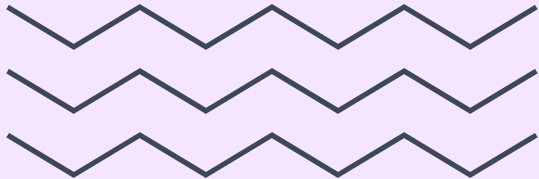
REAL-TIME NUTRITIONAL INSIGHTS

With real-time nutritional insights, users can browse products to instantly access detailed information, helping them make informed decisions on the spot, whether shopping online or in-store. This immediate feedback ensures that every purchase supports their health journey, reducing confusion and promoting healthier eating habits.

SEAMLESS INTEGRATION WITH FITNESS AND MEAL-PLANNING APPS

The HCSA also integrates with fitness and meal-planning apps, offering a unified platform where diet and exercise are seamlessly connected. This integration allows users to see the impact of their grocery choices on their overall wellness goals, promoting a more holistic approach to health management.

AUTOMATION AND CONVENIENCE

By automating product recommendations and simplifying the shopping experience, the HCSA saves users time and effort, enabling them to focus on their health without being overwhelmed. Through its powerful technology, the HCSA accelerates the shift towards a more connected, tech-driven approach to health and wellness.
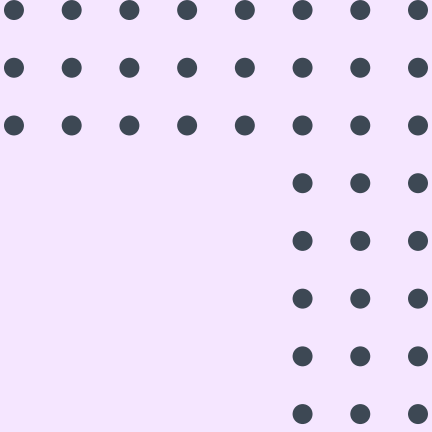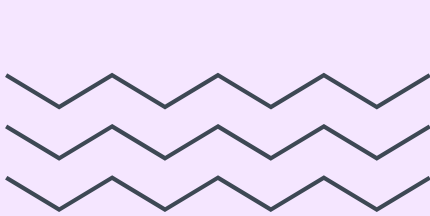
Our Market

Our market includes health-conscious consumers seeking accessible, affordable, and comprehensive health and wellness solutions through a trusted platform. We also target the growing digital health market.

Competitive Analysis

Comparison Criteria	HCSA	Amazon	Target	CVS Health	Kroger	Walgreens
Product Range & Affordability	✓ Wide, affordable	✗ Vast, variable	✗ Premium, limited grocery	✗ Focused on health	✓ Strong in grocery	✗ Focused on health
Healthcare Integration	✓ Strong, integrated	✗ Limited	✗ Less focus	✓ Extensive but pricey	✗ Limited	✓ Integrated but limited
Healthcare Services	✓ Pharmacies, in-app consults	✗ Limited	✗ Limited	✓ HealthHUBs, clinics	✗ Basic services	✓ Clinics, pharmacy
Store Accessibility	✓ High, rural & urban	✗ Online focus	✗ Urban/suburban	✗ Limited grocery access	✗ Regional	✗ Urban/suburban

Research

Nutritional Facts
Serving Size 1/4 Cup(30g)
Servings Per Container About 38

Amount Per Serving

Over 54 million Americans paid gym membership fees in 2014.

-FranchiseHelp.com

Vitamin A 0%   •   Vitamin C 0%
Calcium 4%   •   Iron 8%
*Percent Daily Values are Based on a 2,000 Calories Diet.

Nutritional Facts
Serving Size 1/4 Cup(30g)
Servings Per Container About 38

Amount Per Serving

Americans spent $60 BILLION on weight loss products in 2016

-Washington Monthly

Vitamin A 0%   •   Vitamin C 0%
Calcium 4%   •   Iron 8%
*Percent Daily Values are Based on a 2,000 Calories Diet.

Nutritional Facts
Serving Size 1/4 Cup(30g)
Servings Per Container About 38

Amount Per Serving

More Than 66% of Americans are overweight or obese

-Food Research & Action Center

Vitamin A 0%   •   Vitamin C 0%
Calcium 4%   •   Iron 8%
*Percent Daily Values are Based on a 2,000 Calories Diet.

Nutritional Facts
Serving Size 1/4 Cup(30g)
Servings Per Container About 38

Amount Per Serving

Up to 50% of women are on a diet at any given time.

-Judy Mahle Lutter

Vitamin A 0%   •   Vitamin C 0%
Calcium 4%   •   Iron 8%
*Percent Daily Values are Based on a 2,000 Calories Diet.

- **PATENT FILED:** No

Do you have a working model/prototype: Yes(Partial)
If not, will you be able to show working prototype during finale. Yes.

Thank you!