# Nutrition Assistant Application

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## Introduction:

Due to the ignorance of healthy food habits, obesity rates are increasing at an alarming speed, and this is reflective of the risks to people's health. People need to control their daily calorie intake by eating healthier foods, which is the most basic method to avoid obesity. However, although food packaging comes with nutrition (and calorie) labels, it's still not very convenient for people to refer to App-based nutrient dashboard systems which can analyse real-time images of a meal and analyze it for nutritional content which can be very handy and improves the dietary habits, and therefore, helps in maintaining a healthy lifestyle.

This project aims at building a web App that automatically estimates food attributes such as ingredients and nutritional value by classifying the input image of food. Our method employs **Clarifai's AI-Driven Food Detection Model** for accurate food identification and Food API's to give the nutritional value of the identified food.

## Problem Statement:

Nutrition Assistant project aims at building a web App that automatically estimates food attributes such as ingredients and nutritional value by classifying the input image of food. Our method employs **Clarifai's AI-Driven Food Detection Model** for accurate food identification and Food API's to give the nutritional value of the identified food.
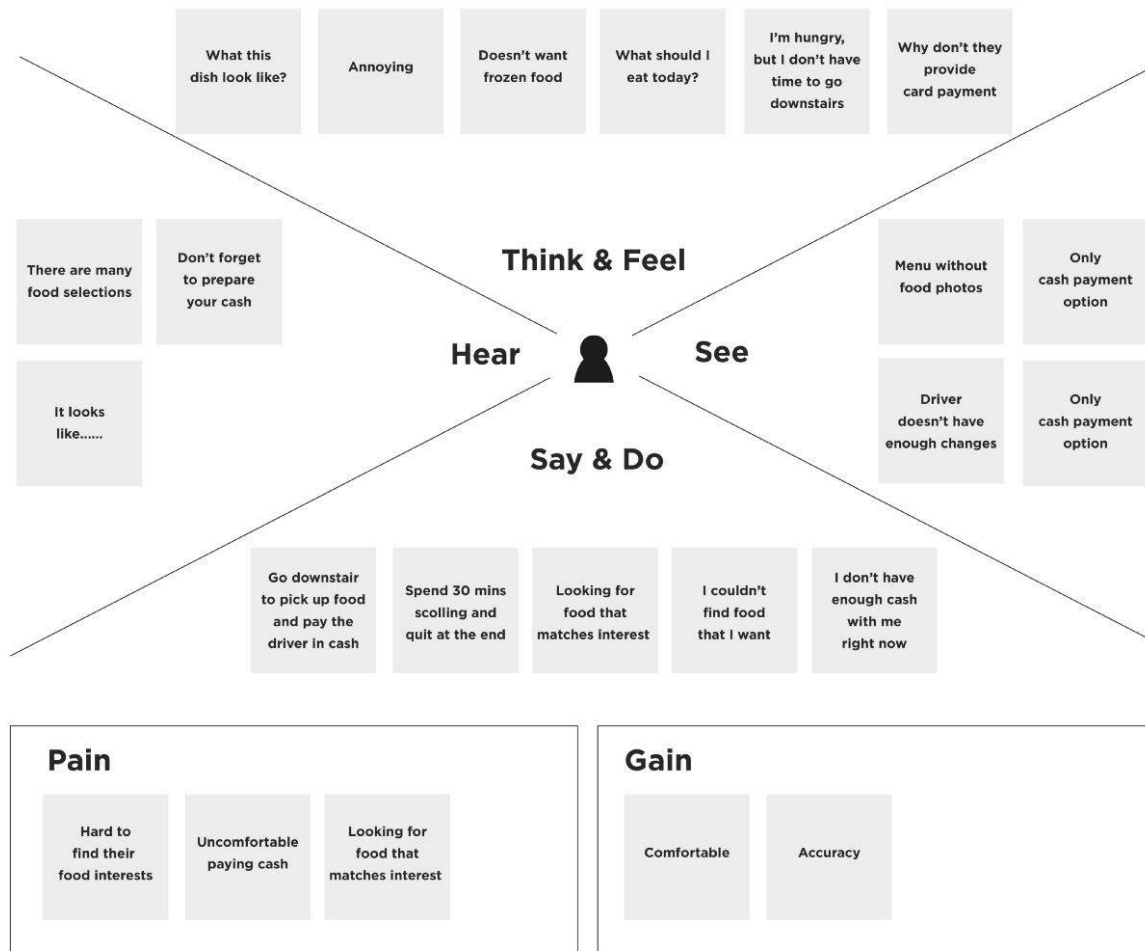
Nutritional support is the provision of adequate nutrients to maintain a healthy body weight and avoid malnutrition. The continuous delivery of high-quality and cost-effective nutritional care to patients has been shown to be an increasingly difficult task. It is observed that dieticians are requested to carry out the nutritional assessment, to manually calculate the nutritional needs and to design the everyday meal plan for each patient. In most cases, these time-consuming tasks are not completed due to lack of time, or inadequate number of personnel Development of a computer assisted information tool with cloud-based on-line diet consultation module and comparison of its efficacy with one-to-one counselling would be efficiently utilized for client education intervention programs.

## Work Flow of the Project:

- User interacts with the Web App to Load an image.
- The image is passed to the server application, which uses Clarifai's AI-Driven Food Detection Model Service to analyse the images and Nutrition API to provide nutritional information about the analysed Image.
- Nutritional information of the analysed image is returned to the app for display.

| | | | | |
|---|---|---|---|---|
| What this dish look like? | Annoying | Doesn't want frozen food | What should I eat today? | I'm hungry, but I don't have time to go downstairs |

Why don't they provide card payment

**Think & Feel**

| There are many food selections | Don't forget to prepare your cash |
|---|---|
| It looks like…… | |

| Menu without food photos | Only cash payment option |
|---|---|
| Driver doesn't have enough changes | Only cash payment option |

**Hear** **See**

**Say & Do**

| Go downstair to pick up food and pay the driver in cash | Spend 30 mins scolling and quit at the end | Looking for food that matches interest | I couldn't find food that I want | I don't have enough cash with me right now |
|---|---|---|---|---|

**Pain**

| Hard to find their food interests | Uncomfortable paying cash | Looking for food that matches interest |
|---|---|---|

**Gain**

| Comfortable | Accuracy |
|---|---|

## Use case:

| Actors | Purpose |
|---|---|
| User:<br>- Registered user<br>- Unregistered user | - Manage profile.<br>- Generate meal plan.<br>- Get calories for selected food item. |
| Admin (Dietitian) | - Manage food database.<br>- Manage profile.<br>- Authorize user.<br>- Generate report. |

## Existing system:

The existing system has the following functionalities:
- The user can get details about a number of nutrients, vitamins etc of a fruit or vegetable.
- The user can add his recipes or get recepies using the API.
- The System basically helps the user in what to eat and which is good, what will help him and etc, the system will help him filter things easily.
- The System also allows the user to make a diet plan and remind him his food timings.

## Proposed System:

- Customized and easy to access interface.
- Individual chat rooms with options of fixing appointments for counselling.
- Options of capturing data from counselling session for future references.
- Counselling for disease oriented diet plans like Ketogenic diet.
- Suggest diet plans.
- Calorie counter for selected food item.
- Alternative dish with required calories.
- Calorie values of more than 1000 International and Indian cuisines.
- Interesting notes on selected food items.
- Recorded health history.

## Conclusion:

Hence, this project aims at building a web App that automatically estimates food attributes such as ingredients and nutritional value by classifying the input image of food.