

**Project Design Phase-I**  
**Proposed Solution**

Date	10 November 2022
Team ID	PNT2022TMID43812
Project Name	AI-POWERED NUTRITION ANALYZER FOR FITNESS ENTHUSIASTS

**Proposed Solution Template:**

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	<ul style="list-style-type: none"><li>• The main aim of the project is to build a model which is used for identifying the fruit depends on the different characteristics like color, shape, texture etc using image processing.</li><li>• Here the user can capture the images of different fruits and then the image will be analysed with the trained model.</li><li>• The model analyses the image and lists out the nutrients present in the fruit like sugar, vitamins, minerals, protein etc.</li></ul>
2.	Idea / Solution description	<ul style="list-style-type: none"><li>• The idea of this application is that the user can capture the images of different fruits and vegetables, and then the image will be sent to the trained model.</li><li>• The model analyses the image and detects the nutrition based on the fruits like (Sugar, Fiber, Protein, Calorie intake, etc.). The above idea is achieved by using the Convolution Neural Network (CNN).</li><li>• It is used to pick the raw pixels present in the image. Fruit Recognition using Color and Texture Features.</li></ul>
3.	Novelty / Uniqueness	<ul style="list-style-type: none"><li>• The application has several unique features. The main feature is that the user need not have to visit or consult a Nutritionist (or) a Dietician to follow a fit and healthy diet.</li><li>• This application has the feature of analysing the entire nutritional content of fruits and vegetables by simply scanning them. It provides for a personalized dietary requirement for individuals who have limited preferences while choosing food.</li></ul>
4.	Social Impact / Customer Satisfaction	<ul style="list-style-type: none"><li>• This will acquire knowledge and provide information about nutrition. Now a days, no one follows the diet plan. Providing this information, they come to know about the nutrition present in each food item.</li><li>• It is used to schedule a diet plan by taking the image of a food item and if we send it, we can get information about each food nutrition like carbohydrates, fat, proteins, vitamins, minerals</li></ul>

		and sugar. This will help others to improve their health and fitness
5.	Business Model (Revenue Model)	<ul style="list-style-type: none"> <li>• Social media is the best way to spread the word about our application and with the help of influencers we can attract normal people.</li> <li>• Clustering and targeting the fitness people with the help of local gyms. Allowing third-party vendors(Nutritional Products) to sell their products through our app via.</li> </ul>
6.	Scalability of the Solution	<ul style="list-style-type: none"> <li>• Artificial intelligence (AI) can be used to predict investment outcomes quickly and effectively, as well as to devise strategies or establish long-term goals. Scalable AI pertains to how data models, infrastructures, and algorithms can increase or decrease their complexity, speed, or size at scale in order to best handle the requirements of the situation at hand.</li> <li>• As improvements continue with data storage capacities as well as computing resources, AI models can be created with billions of parameters. Scaling up nutrition is a global push for action and investment to improve maternal, child nutrition and various health problems.</li> </ul>