

***Project Design Phase – I***  
***Proposed Solution***

<b>Date</b>	<b>03 October</b>
<b>Team ID</b>	<b>26586-1660030073</b>
<b>Project Name</b>	<b>AI-Powered Nutrition Analyzer For Fitness Enthusiasts</b>
<b>Maximum Marks</b>	<b>4 Marks</b>

***PROPOSED SOLUTION:***

The main aim of the project is to build a model which is used for identifying the fruit depends on the different characteristics like **colour, shape, texture** etc using image processing. Here the user can capture the images of different fruits and then the image will be analysed with the trained model. The model analyses the image and lists out the nutrients present in the fruit like **sugar, vitamins, minerals, protein etc.**

---

## ***NOVELTY:***

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. 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.

---

## ***FEASIBILITY OF IDEA:***

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. The model analyses the image and detects the nutrition based on the fruits like **(Sugar, Fibre, Protein, Calorie intake, etc.)**. The above idea is achieved by using the **Convolution Neural Network (CNN)** . It is used to pick the raw pixels present in the image . Fruit Recognition using Colour and Texture Features .

---

## ***BUSINESS MODEL:***

Social media is the best way to spread the word about our application and with the help of influencers we can attract normal people. 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 advertisements is way to generate money. If the products sold through advertisements, then it is even better.

---

## ***SOCIAL IMPACT:***

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. 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 and sugar**. This will help others to improve their health and fitness.

---

### ***SCALABILITY:***

**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. 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.