AI – POWERED NUTRITION ANALYZER FOR FITNESS ENTHUSIASTS

TEAM ID : PNT2022TMID45471

TEAM LEADER : VENKATESH NAVEEN KUMAR S

TEAM MEMBERS : ABDUL MAAJITH M, ADHEEF AHAMED S, MUKESH K

DEPARTMENT : COMPUTER SCIENCE & ENGINEERING

PROPOSED SOLUTION:

The main aim of the project is to build a model which is used for identifying the fruit depending on the different characteristics like color, shape, texture etc
using image processing. Here the user can capture the images of different fruits
and then the image will be analyzed with the trained model. The model analyzes 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 analyzing 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, Fiber, 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 Color 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 are a way to generate money. If the prod ucts are sold through advertisements, then it is even better.

SOCIAL IMPACT:

This will acquire knowledge and provide information about n utrition. Nowadays, no one follows the diet plan. Providing th is information, they come to know about the nutrition present i n 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's nutrients like carbohydrates, fat, p roteins, vitamins, minerals and sugar. This will help others to imp rove their health and fitness.

SCALABILITY:

Artificial intelligence (AI) can be used to predict investment o utcomes 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 co mplexity, speed, or size at scale in order to best handle the require ments of the
situation at hand. As improvements continue with data storage capacities as well as computing resources, AI models can be c reated with billions of parameters. Scaling up nutrition is a global push for action and
investment to improve maternal, child nutrition and various health problems.