

AI-Powered Nutrition Analyzer for Fitness Enthusiasts

Aim:

To develop a Nutrition Analyzer for Fitness Enthusiasts powered by Artificial Intelligence which take camera captured images of fruits.

Problem Statement:

The main aim of the project is to build a model that displays nutrition content in a fruit depends on the fruit's color, shape, texture. Balanced Nutrition and healthy diets are important factors to improve the lifestyle by preventing diseases and ageing. Hence Food is essential for a human being but food industry comprises complexities and challenges to preserve the nutrition in the food and leads to evolution of CNCD (chronic non-communicable diseases), including, cardiovascular diseases, depression, and obesity. Further, product ideas and advanced packaging demand thorough data collection, testing, and certification before approaching consumers. If this work is performed manually, it brings high possibilities of errors that ultimately lead to time and money wastage with no beneficial outcomes. Here AI in nutrition plays a significant role in offering the extraordinary potential for preventing diseases and better treatment methods.

Traditional data recording and calculation methods were tedious and not free from human errors; luckily, disruptive digital technologies stepped in to record data and calculated mission-based statistics effectively. Transformation offers a strong basis to use previous data to better the next generation. Artificial intelligence and machine learning in nutrition use raw data and extract competitive features that are advantageous for predicting better dietary plans.

Many people, have their own method or app to analyze their daily intake of nutrition, which they feel is one of the main factor for maintaining a healthy body and one of the important steps among many towards fitness. It is a good habit for a person to record daily intake of nutrition but due to unawareness and lack of proper applications to suit their privacy, lacking proper predefined plans based on actual data of nutrition present in various food, they tend to either give up, or use methods which are not that much helpful. Due to lack of a complete tracking system, there is a constant struggle to properly know the necessary amount of nutrition needed and the amount we intake, then the total estimation till the end of a certain period.

Who does the problem affect?	People who want to stay fit
What is the issue?	We can't use google search to know the nutritional value of each food we eat. It consumes a lot of time to know each food item's nutrition by searching and checking a lot of sites. Sometimes, we even get false information by opening random websites.
When does the issue occurs?	When people have trouble on deciding what food they want to eat and what they want to avoid to lose or gain weight according to their needs. For people who are unable to get the information they want by searching on the internet. For people who are busy with their jobs to exercise regularly, so they decide to follow a specific diet by eating food rich in particular nutrition and avoid foods which contain fat.
Where is the issue occurring?	The issue occurs when the person is unable to track their daily nutrition intake.
Why is it important that we fix the problem?	By solving this issue, these people can properly decide on their diet plan to achieve the desired result of staying fit.