PROJECT OBJECTIVE

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TEAM ID	PNT2022TMID30612
PROJECT NAME	AI-Powered Nutrition Analyzer For Fitness Enthusiasts

Food is a necessity for human life and has been addressed in numerous medical conventions. Modern dietary evaluation and nutrition analysis technologies give consumers more possibilities to explore nutrition patterns, comprehend their daily eating habits, and keep up a balanced diet. Finding out a food's nutritional value is done through nutritional analysis. Information about the chemical make-up, processing, quality assurance, and contamination of food is a crucial component of analytical chemistry. The primary goal of the project is to develop a model that will be used to categorise fruits according to their various attributes, such as colour, shape, and texture. Here, users can take pictures of various fruits, which are subsequently uploaded to a trained algorithm for analysis. The algorithm examines the image and determines the nutritious content of fruits such (Sugar, Fibre, Protein, Calories, etc.). **Back Propagation Neural Network** technique is utilized as a classification approach to forecast the nutritional content.

The way of life in the contemporary world is changing every day, and with these changes comes a change in the needs of the human body's composition, which includes a variety of consumables or prepared foods. One problem that arises in our daily lives as a result of an abundance of food is obesity, or fatness. This problem is brought on by the body's overuse of calories. Obesity is becoming a widespread issue in contemporary society. We thus require a system that can influence people's eating preferences and provide them instructions that result in good body maintenance. People can determine their daily intake of calories from their food items if a system notifies them of the nutritional information of a food item and classifies it as healthy or unhealthy and also the nutrition content to the user. Our task is to first ascertain the category of food, and then after forecasting the category of food (fruit or vegetable), our system ascertains the category of that image (if the image is in the category of food or vegetable). In order to identify the category based on the image uses a combination of Deep Learning to recognise the image. Numerous segmentation and image characteristics are included in our system.