Ideation Phase
Define the Problem Statements

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Project Name	AI-powered Nutrition Analyzer for Fitness Enthusiasts
Maximum Marks	2 Marks

Motivation and Problem Statement

There is several major health problems in society today and Obesity is one of the main issues. It has increased for nearly three times as much as compared to the year 1975. In 2016, 39% of the adults who are aged 18 years old and above were overweight, and 13% of them were obese (WHO, 2018). It is associated with diseases like cardiovascular, hypertension and also menstrual problems.

Over time, people have been become more conscious about their diet and attempt to have calories control over the years. People have better self-conscious in taking care of these issues and eat healthier with a proper diet plan. Counting the Calorie is a common technique used to calculate their energy taken from one's food consumption. Many are used for the purpose of losing, gaining and maintaining weight. In the past, people have been using traditional ways in calorie counting where they estimate the portion of their meals and then estimating the number of calories in the calories listed book. But this method is pretty much inaccurate since people required to estimate their food portion and the process is very time consuming where they need to look for different listing in the book.

As of now, people have been using modern ways to estimate the calories. Many health-based applications have featured this function in it, where they provide a calories information database for the users and they can search manually through the food listed, then the application will summarize the counting. Nutritional information will also be listed for the user purpose. Moreover, some applications allow the users to capture a picture of their meal & algorithm which is used to process the image and automatically detect the objects, listing down all the nutritional facts and calories information related to the food in a generalized portion.

Although these applications are able to do the basic calories counting, but the result is based on a generalized portion and the amount can be customized by the users. This will lead to inaccurate result, since the portion itself is selected by the users. Users doesn't know how much amount of proper food they are consuming, So the calculations for the calories counting could be wrong. However, this can be improved and enhanced using object counting algorithm. The idea here is to

classify each of the class into different kind of portion with an appropriate calorie's information, then the applications should able to do quantities counting from the image taken by the user. Therefore, the algorithm is able to segment the portion size of the food itself and then determine the correct quantities, and finally provide a more accurate and reliable calories information based on the values. This is aimed to further enhance calories counting by improving the accuracy of the result and avoid the hassle of having users to manually do a look up in the listing, the process could be shortened and assist them in planning a more reliable diet.

Workflow:
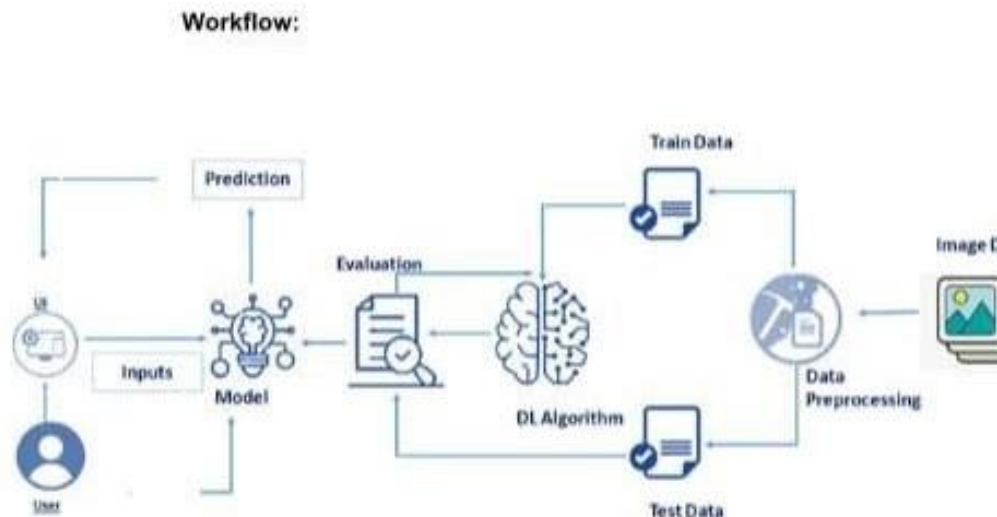
Question	Description
Who does the problem affect ?	The users who want to maintain a healthy and fit body but have no one to guide them on their dieting.
Why is it important ?	It is important and easy for a user to use a AI software rather than having a physical consultant
What are the Benefits ?	• AI based technology to detect accurately. • Faster processing of data • Better and interactive UI / UX.
How is it better than the others ?	Application with interactive UI and UX with optimized model with higher accuracy to predict accuracy.
When to use?	The scenario where we want to have a nutrition analyzer.

I am	I'm trying to	But	Because	Which makes me feel
fitness freak	maintain my health	but i dunno how to	i lack knowledge	angry and feel bad
human	balance diet	i am not able to	i donot know nutrient contente	helpless
patient	to get immune and nuttrition	intoxicated body	unhealthy eating	frustrated
parent	feed my child healthy fod	unaware of nutrient value	i have learnt enough	irresponsible