# PROBLEM STATEMENT FOR NUTRITION ANALYSER FOR FITNESS ENTHUSIASTS

## INTRODUCTION:

The modern lifestyle is characterized by lack of physical activity, junk food and work related stress which adversely affects people's wellbeing and consequently their quality of life. According to World health organization (WHO, 2017) insufficient physical activity and unhealthy diet contribute to over 3 million deaths annually. Metabolic disorders, some form of cancers, osteoporosis, hypertension and type 2 diabetes are among the diseases associated with lifestyle (Linsay, et al., 2010) To address the problem, it is imperative to embrace a lifestyle of regular exercise and a healthy diet as observed by (Klein, et al., 2014). Nonetheless effective reduction of the global cases of lifestyle related diseases still remains to be a daunting task. With the highly dynamic technological advances, technical interventions are being sought to influence the lifestyle of people by promoting healthy habits. mHealth for instance has been instrumental in promoting behavioral change by creating awareness to mobile phone users on healthy lifestyle such as proper dietary habits and physical activity.

## DESCRIPTION:

Food is essential for human life and has been the concern of many healthcare conventions. Nowadays new dietary assessment and nutrition analysis tools enable more opportunities to help people understand their daily eating habits, exploring nutrition patterns and maintain a healthy diet. Nutritional analysis is the process of determining the nutritional content of food. It is a vital part of analytical chemistry that provides information about the chemical composition, processing, quality control and contamination of food.

The main aim of the project is to building a model which is used for classifying the fruit depends on the different characteristics like colour, shape, texture etc. Here the user can capture the images of different fruits and then the image will be sent the trained model. The model analyses the image and detect the nutrition based on the fruits like (Sugar, Fibre, Protein, Calories, etc.).

# DETAILS:

And indeed, most athletes and fitness enthusiasts are rushing through their daily exercise routine without even knowing the basic difference between proteins and carbs.But conducting purposeful physical exercise without sports nutrition knowledge is like running around in a dark forest. Blindfolded.And because those athletes and fitness enthusiasts reach far-from optimal results they are trying to compensate their knowledge BLIND SPOT by turning to crazy expensive supplements that hardly ever work.

That made me realize there is a massive need for practical, easy to understand fundamental sports nutrition learning, so I decided to establish the School of Sports Nutrition.Our comprehensive course is turning completely uninformed athletes and fitness enthusiast into knowledgeable sportspersons allowing each and every one of them to adapt and fine-tune their diets and see their exercise performance improve without ever increasing training time.So take off that blindfold, click on the purple 'ADD TO CART' button and enroll in our exciting new course: SPORTS NUTRITION FOR ATHLETES AND FITNESS ENTHUSIASTS. Join us straightaway and start building your sports nutrition knowledge from zero to hero level.

**Who this course is for:**

The course is for amateur -and professional athletes as well as fitness enthusiasts. Our goal is to help students get a better understanding of sports nutrition and use their acquired knowledge to augment the outcome of their exercise efforts and athletic performance.

# PROPOSED SYSTEM:

HealthifyMe is a leading Indian health and fitness app whose artificial intelligence powered virtual nutritionist, Ria, helps its users regarding their queries around fitness and nutrition in both audio and text in more than 10 languages

Ria uses key learning's obtained from HealthifyMe's 250 million tracked foods, workouts and 10 million message exchanges between coaches and clients. HealthifyMe supposedly owns the largest data set in this regard and are compatible with popular fitness wearables devices currently available in India.

AI in nutrition optimizes four core operations as discussed:

- **Food Science:** AI automates recipe building by performing in-depth market analysis and ensures safety measures.
- **Distribution and Supply Chain*:*** AI in nutrition helps via predictive analytics in minimizing wastes, saving costs, visual pattern recognition, agile, and accurate forecasting.
- **Customer Experience:** Artificial intelligence monitors customer traffic and engagement and learns from insights to promote self-service and sales systems.
- **Manufacturing*:*** It involves reducing risk and predictive maintenance with IoT (internet of things) to create better-connected businesses.

Plenty of AI in nutrition apps are available with high accuracy; some are discussed below:

## 1. Neutrino: AI Nutrition App

As the name shows, the app delivers nutrition-based analytics and data to its users and becoming a leading platform for delivering AI fitness services. It uses mathematical and natural language processing (NLP) models to deploy predictive analysis for tailored data compilation. Further, it shares nutrition-based data with its partners through SDK and API integration to enhance its services and product offering.It is an Israel-based startup founded in 2011 shares pregnant women to personalize their body's nutritional demands. This app joined its effort with IBM's natural language power to offer 24/7 support and food recommendations.

## 2. FitnessAI: Ultimate Workout at Home Solution

This fitness AI app is created with customized workout plans per user. It started as "gym only software" but now updated its system to meet "at home fitness" demands. ***FitnessAI*** claims to "outperform any human fitness trainer" as its algorithm is trained on over 5.9 million workouts. Moreover, it considered over 10 million sets, weights, and reps from about 30000 advanced gym-goers and weightlifters over three years. In other words, it is an excellent example of machine learning in action for planning workouts exceptionally.


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SODIUM
PROTEIN
CALCIUM
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