AI-Powered Nutrition Analyzer For Fitness Enthusiasts

Category: Artificial Intelligence

TEAM LEADER: D. Sterling Sneha

TEAM MEMBERS

R. Aarthi

M. Amara

A. Arokiya Prathicksha

Industry Mentor(s) Name: Sowjanya , Sandeep

Faculty Mentor Name: Angel C

Use cases:

In India , because of unhealthy food, most of the young people are dying due to obesity, type 2 diabetes , heart disease , high blood pressure and stroke.

Nowadays new dietary assessment and nutrition analysis tools are available.

Nutritional analysis is the process of determining the nutritional content of food. This helps the fitness enthusiast to track and monitor their intake nutrition and calorie intake.

Novality:

1.Food image analysis algorithms running at FC

Once the food images are captured , we will conduct two types of computations at mobile device in the front-end components(FC) that is edge layer image preprocessing and image segmentation.

2.CNN-based food image analysis algorithms running at BC

After the image preprocessing and segmentation at FC, we will further analyze these images at BC. Our proposed approach running at BC is based on the recent advances on deep learning, which aims to learn multiple levels of representation and abstraction that help infer knowledge from data such as images, videos, audios and text.

Future concate layer

a)

1\*1

convlayer

h

3\*3 max

Pooling layer

3\*3

convlayer

3\*3

convlayer

Previous layer

Feature concate layer

1\*1

convlayer

3\*3

convlayer

3\*3

convlayer

1\*1

convlayer

3\*3

convlayer

1\*1

convlayer

1\*1

convlayer

Previous layer

b)

Feasability of ideas:

For pregnant ladies we split it as 2 catagories as during pregnancy and after pregnancy. we add their diet plans exercises, sleep time management ,medical advices and medicine intake remainder and after pregnancy weight loss exercises , diet plans step tracking and calorie tracking.

And for diabetes patients and for hyper tension patients their diet plans , exercise plan , water level maintenance tracker, meditation ideas.

Business models:

Social media is the best way to spread the world about our application .And with the influencers we can attract the normal people.

Clustering and targeting the fitness people with the help of local gyms.

Social impact:

The main purpose of this application is to make people awareness on their general health.

Scalability of solution:

At first we will study about the food composition then research on production of nutrients ,then the influence of nutrients on physiological and pathophysiological functions ,clinical nutrients intake, then dietary assessment and physical monitoring systems.