Research Paper on Food Recognition

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ABSTRACT

Understanding food from digital media has become a difficult task with significant applications in a variety of fields. Food, on the other hand, is an essential part of human life because diet has a direct impact on one's health.

In this paper, we present a food recognition application which can recognize various types of food items. With this feature, the application can easily help users to recognize the food item in various restaurants. Our application uses React JS for the front-end and Node JS for the backend.

KEYWORDS: food recognition, Node JS, API

1. PROBLEM STATEMENT:

The aim of this challenge is to train models that can analyze food images and identify the individual food items that are present. There are many popular options in the app marketplace right now that assist people with dietary details, but these options are sluggish and frustrating, resulting in the user deleting the app. We propose an app in which the user takes a photo of their meal, and our app recognizes the food on their plate and provides basic dietary information about it. In the future, we intend to add a feature to the app that allows users to search for food-related articles to read (the motive of adding this feature will be to spread awareness regarding healthy food consumption) and more things will be added in this app according to users feedback also.

2. OBJECTIVE:

➢ The app will be having a feature in which The user can click the picture of food & it will tell the user that which type of food it is, How much healthy/unhealthy will it be for the health & how much calories are there in this particular food and how much weight gain will be their if the user eats this food on regular basis.

➢ Second feature is that this app will tell that in this particular age group what you should eat so as to be healthy.

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➢ Another feature will be that it can tell which food is famous in a particular state.

➢ Another feature is that the user can access this app anywhere whether he is inside his home or in a restaurant, it all depends on the user, that where he wants to use the app because this app will work perfectly fne for any food whether it is home-made or restaurant made.

3. INTRODUCTION:

A HEALTHY DIET Will HELP YOU LIVE A HEALTHY LIFESTYLE.

The importance of diet in human life cannot be overstated. It is important for our wellbeing to get enough nutrients from our daily meals. Because of the negative effects of obesity on our wellbeing, automatic food detection and calorie calculation have become a major concern in recent years. Obesity may lead to heart disease, diabetes type 2, obstructive sleep apnea, cancer, osteoarthritis, and asthma, among other things.

Junk foods and processed foods, according to researchers, are to blame for the rise in childhood obesity[2]. Extra calories will wreak havoc on the safe development and function of our brain's synapses. Fried chicken, pizza, burgers, and other fast food items are common among both children and adults. People often purchase these high-calorie

foods to curb their appetites, especially when they are stressed. and unable to take their meal in time.

People today are more aware of their health conditions and strive to eat a balanced diet. Dietary evaluation is becoming more common as smart phone and computer-aided object recognition techniques become more widely available. While identifying food and estimating its calorie content is a diffcult job, several successful steps have already been taken in this direction.

We also recommend a simple but more accurate calorie calculation method that assists people in determining the amount of fast food and snacks they may consume as well as determining whether the food is unhealthy or not.

Without a question, one of the most important aspects of life is one's well being and diet. A healthy diet can help with anything from brain development to physical ftness. Food has an effect on all of your cells and organs.

As a result, technical advancements that can help improve and even encourage health consciousness are critical. It is now easier to be aware of health information thanks to technological advancements. Many applications are being designed to serve as a platform for health monitoring and dietary guidance since they have the potential to support health needs such as heart rate detection, food classifcation, and many others.

We're using technology to create a food recognition app that can be used as a health awareness tool for ftness freaks, diet-conscious people, athletes, and people who aren't concerned about their health. The use of smart-phone apps has opened up new avenues for people to become more health-conscious.

One of the most pressing issues of modern life is one's health and well-being. We all know how important food and technology are in our lives, and fnding a common ground between the two might make health and diet management simpler than ever.

Athletes, bodybuilders, and the average health-conscious person all over the world will beneft greatly from the ability to take a picture of food and quickly determine its nutritional value. Our approach makes the ever-important job of staying safe more simple and convenient.

4. CONCLUSION:
There are a few popular options in the app store right now that help with dietary details, but they're sluggish and inconvenient, which leads to the user deleting the app. These issues arise as a result of an unnecessarily complicated method for entering food data for precise results, such as the weight of meat or vegetables consumed or the amount of liquid consumed. People will have to use a scale or search the bag for information if their food came in a box to get these fgures. Companies that enable barcode scanning make this process simpler, but this does not work for recipes and homemade foods.

We suggest an app in which the user simply takes a photo of their meal, and our app recognizes the food on their plate and offers basic dietary details.

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