

Title:

“Nutri-Mental” –An Android Application For Personal Health And Nutrition Management.

Published:2020- 5th International Conference on Communication and Electronics Systems (ICCES)

Link:

<https://ieeexplore.ieee.org/document/9137890>

Authors:Sonakshi Khosla,DhutimaMalla,IshankDua, Deepa Bura,Pronika Chawla

Abstract:

These days, people are getting more wellbeing cognizant and will, in general, keep a beware of the dietary addition from the stuffed sustenance things they use. The rising growth of Android in the field of Operating System's has brought many advancements and proficient things such as applications, games and many more but also it leads to many complexities such as Mobile Exploitation done through Kali Software. The rising growth of the Android in the field of Operating System's has brought many advancements and proficient things such as applications, games and many more but also it leads to many complexities such as Mobile Exploitation done through Kali Software. The growth of Applications is increasing day by day. In this paper, the android platform is looked at in much more detail and will understand the future scope of Android and will implement Text To Speech and Vice Versa. This paper proposes an innovative Fitness Tracking app using the Android platform. The app would help the users to maintain a healthier lifestyle and eat more nutritious food. The proposed app gives an insight into nutrition that a person should have by eating a properly balanced diet and will present an outline on further research and development of the application.

Title:

Determining the nutrition of patient based on food packaging product using fuzzy C means algorithm.

Published:2017-4th International Conference on Electrical Engineering, Computer Science and Informatics (EECSI)

Link:

<https://ieeexplore.ieee.org/document/8239151>

Authors:Sri Winiarti,Sri Kusumadewi, IzzatiMuhimmah,Herman Yuliansyah.

Abstract:

The main idea in this research is the utilization of Fuzzy C Means (FCM) method as the determination of patient's nutritional status, which is implemented, in mobile application. Parameters used to cluster nutritional status are height, weight and age. The result of the decision will give 3 clusters on nutritional status is good nutrition, malnutrition and better nutrition. Mobile apps are used as a reminder of the nutritional value or ingredients contained in the packaging of food products while consuming food. The result of system testing for application of FCM algorithm in this mobile application obtained validation of 80%.

Title:

OCR and Barcode based Halal and Health Analyzer

Published: ICISCT-2020

Link:

<https://ieeexplore.ieee.org/document/9080036>

Authors: Tooba Akram, Huma Hasan Rizvi; Syed Adeel Ali, Shahzada Muhammad Hamza, Aqib Iftikhar.

Abstract:

Halal food is lawful or permitted food and statutory for Muslims. In foreign countries, Search of Halal food is difficult. Our app assists peoples from anywhere to find guidance of Halal food, not only Halal Our app helps to grant alternatives, provide allergies and user can see his/her nutrition Consumption. Barcode scanning is used for the suggestion of Halal food with the advancement of variety of language translates and alternatives also for data storing we applied data automation using OCR and Barcode.

Title:

A Simple, Low-Cost and Efficient Gait Analyzer for Wearable Healthcare Applications

Published: IEEE Sensors Journal (Volume: 19, Issue: 6, 15 March 2019)

Link:

<https://ieeexplore.ieee.org/document/8561201>

Authors: Sumit Majumder; Tapas Mondal; M. Jamal Deen

Abstract:

The aging population is projected to rise significantly due to continuous improvements in healthcare, personal and environmental hygiene, nutrition, and education. This large aging demographic may cause adverse socio-economic impacts in terms of the costs associated with healthcare and social services. In order to support the healthcare needs of the elderly in a cost-effective manner, affordable, non-invasive, easy-to-use, and reliable predictive diagnostic and monitoring solutions are required. Therefore, walking or gait, being a good indicator of our overall health status may be exploited as a simple, noninvasive, and reliable metric for health assessment. In this paper, we report on a simple, low-cost, and non-invasive gait analyzer that can quantitatively identify the healthy gait corresponding to gender and age, and can thereby evaluate an individual's gait with respect to the baseline characteristics of his/her peer group. Upon constructing a database of walking signals from 74 healthy subjects aged 18-65 years, we employed the computationally efficient discrete wavelet packet analysis method to extract a set of temporal, statistical, and energy features. The features obtained from the apparently healthy subjects were classified using the support vector machine, forming two distinct clusters in the baseline gait characteristics corresponding to gender and age. This simple and inexpensive gait analyzer can potentially be transformed into a portable and continual remote monitoring tool to evaluate and early diagnose the decline of the musculoskeletal or cognitive health of the user, thus facilitating healthy aging at home.

Title:

Development of an Android Fitness App

Published: December 2017

Link:

<https://repository.ihu.edu.gr/xmlui/handle/11544/29049>

Author:AimiliaKagkini

Abstract:

The surge in “smartphone ownership” has fashioned a foundation for fitness apps that can assist individuals in improving their health and stamina, by increasing motivation for physical exercise using gamification principles and wearables. However, the retention rate of such apps is low in comparison with other types of apps. In this dissertation, a review of most popular fitness mobile apps was conducted and a comparison of different gamification techniques was made. The findings showed that most fitness apps are complex to use, have too many features and do not provide enough motivation. To address some of the above shortcomings a fitness application was developed, which is simple, connects to a wearable and uses levels and avatars to increase motivation. The application was evaluated by a group of volunteers with quite positive results. The results showed that the developed application can be further improved in the future.

Title:

Electronic Human Nutrition Analyzer for Managing Obesity (EHNAMMO)

Published:ResearchGate - 2022

Link:

https://www.researchgate.net/publication/362638703_Electronic_Human_Nutrition_Analyzer_for_Managing_Obesity_EHNAMMO

Authors:A.P. Adesiyan,O.A. Adepegba, S.A Adepegba, O.B.Lounge

Abstract:

The bad eating habits in the Nigeria society is increasing and the Obesity rate is constantly increasing but to monitor the Nutritional status simply means booking an appointment with a nutritionist with long hours of waiting time to get answers. Another important factor is cost of getting an appointment this could be high to an average Nigerian giving the fact that seeing a nutritionist is not one-time bargain as one would continuously need to book an appointment on the long run. The developed is capable of allowing users to enter personal details such as height, weight, age, gender and other factors to efficiently monitor the user nutritional status. By calculating the B.M.I (Body mass index) the system easily identifies the nutrition status of the user and proceeds to recommend appropriate profile for the user such as gaining weight, maintaining weight and losing weight and also likewise calculating B.M.R (Basal Metabolic rate) of the user the system automatically knows the amount of calories needed to be present in the individual nutritional status based on the users profile. The web application was developed using Php7 and Mysql which can be deployed on to any web server for the application to be accessible to users. This web based nutrition analyzer allows users to generate their own diet/Nutritional Food-time table which can be followed to achieve a healthy Nutritional Status. The study gives room for nutritionist to user interaction in order to help boost user satisfaction, the system has the capabilities of generating reminder, alerts, exercise routines and constantly motivates the user to use the application and improve their nutritional habits.

Title:

A Mathematical AI-Based Diet Analysis and Transformation Model

Published:ResearchGate 2022

Link:

[https://www.researchgate.net/publication/325161143 A Mathematical AI-Based Diet Analysis and Transformation Model](https://www.researchgate.net/publication/325161143_A_Mathematical_AI-Based_Diet_Analysis_and_Transformation_Model)

Authors: L.K Gautam, S.A Ladhake

Abstract:

Inadequacies in nutritional intake can be considered as a major source of adverse effects on the growth and health of individuals in India. A proper balanced diet is essential from the very early stages of life for proper growth, development, to remain active and to reduce the risk of diseases. For those with diabetes, a proper diabetes diet is crucial which depends upon their energy requirements. So a need has been identified to develop educational software which should perform the routine task of analyzing, optimizing, and transforming diet by considering their energy requirements and medical problems. The different nutritional values present in a diet are generally affected by imprecision, which can be represented and analyzed by fuzzy logic. For diet balancing, a metaheuristic local search algorithm is proposed which works in a local search space recording the history of search to make it more effective and optimized. These proposed methods will help users to improve their nutritional intakes by providing detail analysis of their food intake, by providing an optimized diet plan and by suggesting possible changes to make their diet suitable according to their energy requirements.

Title:

Food Image Analysis and Dietary Assessment via Deep Model

Published:IEEE 2020

Link:<https://ieeexplore.ieee.org/document/8998172>

Authors:Landu Jiang, BojiaQiu, Xue Liu, Chenxi Huang, Kunhui Lin

Abstract:

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. In this paper, we develop a deep model based food recognition and dietary assessment system to study and analyze food items from daily meal images (e.g., captured by smartphone). Specifically, we propose a three-step algorithm to recognize multi-item (food) images by detecting candidate regions and using deep convolutional neural network (CNN) for object classification. The system first generates multiple region of proposals on input images by applying the Region Proposal Network (RPN) derived from Faster R-CNN model. It then identifies each region of proposals by mapping them into feature maps, and classifies them into different food categories, as well as locating them in the original images. Finally, the system will analyze the nutritional ingredients based on the recognition results and generate a dietary assessment report by calculating the amount of calories, fat, carbohydrate and protein. In the evaluation, we conduct extensive experiments using two popular food image datasets - UEC-FOOD100 and UEC-FOOD256. We also generate a new type of dataset about food items based on FOOD101 with bounding. The model is evaluated through different evaluation metrics. The experimental results show that our system is able to recognize the food items accurately and generate the dietary assessment report efficiently, which will benefit the users with a clear insight of healthy dietary and guide their daily recipe to improve body health and wellness.

Title:

Android Application for Personal Diet Consultant

Published:IJEAST – 2021

Link:<https://www.ijeast.com/papers/202-205,Tesma512,IJEAST.pdf>

Author: Garvita Gehlot

Abstract:

DietExpert is an android application is a provides a personalized diet to its users. It acts as a diet consultant similar to a real Dietitian. This system acts in a similar way as that of a dietitian. A person in order to know his/her diet plan needs to give some information to the dietitian such as its weight, height, gender etc. Similar way this system also provides the diet plan according to the information entered by the user. The system asks all data from the user and processes it to provide the diet plan to the user. The project has a login page where the user is required to register his/her account and then they can use the app. Thus, the user does not need to visit any dietitian which also saves time and the user can get the required diet plan in just a click. The system will give more accurate results as it accepts the data entered by the user and processes it depending on some metrics already known to the application on the basis of which a diet plan is generated and ask the user if the user accepts the diet plan. If not accepted the system may also giveand alternative diet plan. If a user wants to stay fit and eat healthy, he can surely follow the program provided to him. The Application also has a card for Health Facts on the home screen, which will provide all the general knowledge and some amazing facts on our human body and body parts. This Application can be a vital part of a user if he wishes to maintain his health and body perfectly and follow the diet plan & the workout plan provided to the user.

Title:

Food Classification Using Transfer Learning And TensorFlow

Published:Analytics Vidhya 2021

Link:

<https://www.analyticsvidhya.com/blog/2021/05/food-classification-using-transfer-learning-and-tensorflow/>

Author: Mrinal Singh Walia

Abstract:

Image classification is a job where a machine will predict a picture belongs to which category. Before deep learning begins booming, tasks like image classification cannot attain human-level achievement. It's because the machine learning model cannot determine the neighbour knowledge of an image. The model only receives the pixel-level command. Thanks to the potential of deep learning, image classification tasks can transfer a human-level performance utilizing a model described as Convolutional Neural Network (CNN). CNN is a sort of deep learning model that studies representation from an image. This model can determine from flat to high-level features without individual engagement. The model receives not only data on a pixel level. The model also gets the neighbour data from an image by a mechanism called convolution. Convolution will aggregate neighbourhood data by multiplying the compilation of pixels in a range and sum them into a value. ML model will accept those features to classify the picture into a group. Although deep learning can accomplish human-level production, it needs a considerable volume of data.