**NUTRITION ASSISTANT APPLICATION**

**ABSTRACT**

Good nutrition is essential to keeping current and future generations healthy across the lifespan. However, when healthy options are not available, people may settle for foods that are higher in calories and lower in nutritional value. Most people don’t eat a healthy diet and consume too much sodium, saturated fat, and sugar, increasing their risk of chronic diseases.

To overcome the above issue, the Cloud based “Nutrition Assistant Application” has been proposed. Software applications used on the mobile devices are a novel technology that can be used to deliver brief health behaviour change interventions directly to individuals with potentially favourable cost-utility.

This project aims at building a web App that automatically estimates food attributes such as ingredients and nutritional value by classifying the input image of food.  Our method employs **Clarifai's AI-Driven Food Detection Model** for accurate food identification and Food APIs to give the nutritional value of the identified food. Nutritional information of the analysed image is returned to the app for display. The above-mentioned application is used in real time applications.

**LITERATURE SURVEY**

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| S.no | Title | Abstract | Reference |
| 1 | Effectiveness of Game-based Learning of a National Health e-Learning Network for nutrition education in elementary school | This research intended to study the effects of utilizing games in health e-learning network on teaching third graders in elementary schools about nutrition. The studied groups of this research were 2 classes of 33 third graders; the two classes were separated into experimental and control group. The experiment was implemented in a four-week duration. The experimental group learned the knowledge of nutrition based on game playing on a national health e-learning network, whereas the control group was lectured with multi-media slide shows. | <https://ieeexplore.ieee.org/document/5406187> |
| 2 | A Diet control fitness assistant application using Deep Learning based image classification. | With more and more attentions paid on health, people begin to care about healthy diet options created by experts on nutrition. However, it will take a long time to observe the effects by taking healthy diet. This causes great difficulty for users to follow the healthy diet strictly. Most existing applications are not user-friendly in inputting information to the application. Then it becomes difficulty to track for exact health status. | https://www.academia.edu/43016077/A\_DIET\_CONTROL\_AND\_FITNESS\_ASSISTANT\_APPLICATION\_USING\_DEEP\_LEARNING\_BASED\_IMAGE\_CLASSIFICATION |
| 3 | Enhancing cloud and Big Data Systems for healthy food and information systems Practice | Cloud Computing is a kind of virtualization technology based on internet. In cloud computing, central remote server plays an important role for healthy data management and applications. It offers handsome efficiency in the field of Computing as well as Information Technology for providing centralized storage, money, processing, and bandwidth. | https://www.researchgate.net/publication/322152435\_Enhancing\_Cloud\_and\_Big\_Data\_Systems\_for\_healthy\_Food\_and\_Information\_Systems\_Practice\_A\_Conceptual\_Study |
| 4 | Digital Nutrition Consultation among Hand-Held Device Users During COVID-19 Pandemic | Nutrition and clinical dietetic services provide evidence-based support which has become essential for maintaining healthy lifestyle and avoiding malnutrition among population. National health with digital technology integration is gaining importance in the current COVID-19 pandemic scenario. Digital health technologies offer valuable means for community to create and share information about healthcare. | https://www.researchgate.net/publication/357303031\_Digital\_Nutrition\_Consultation\_among\_Hand-Held\_Device\_Users\_During\_COVID-19\_Pandemic |
| 5 | Development of a cloud based solution for effective Nutrition Intervention in the Management of Lifestyle Diseases | With more and more attentions paid on health, people begin to care about healthy diet options created by experts on nutrition. However, it will take a long time to observe the effects by taking healthy diet. This causes great difficulty for users to follow the healthy diet strictly. Most existing applications are not user-friendly in inputting information to the application. Then it becomes difficulty to track for exact health status. | https://www.researchgate.net/publication/346411010\_DEVELOPMENT\_OF\_A\_CLOUD\_BASED\_SOLUTION\_FOR\_EFFECTIVE\_NUTRITION\_INTERVENTION\_IN\_THE\_MANAGEMENT\_OF\_LIFESTYLE\_DISEASES |