LITERATURE SURVEY

| Title of the paper | Author | Year | Journal Link | Concept Used | Limitations |
| --- | --- | --- | --- | --- | --- |
| A survey on AI nutrition recommender systems | Thomas Theodoridis,Vassilios Solachidis,Kosmas Dimitropoulos,Lazaros Gymnopoulos,Petros Daras. | 2019 | [A Survey on AI Nutrition Recommender Systems](https://vcl.iti.gr/vclNew/wp-content/uploads/2019/06/PETRA_2019_Survey_AI_Nutrition_Recommender_Systems.pdf) | Object recognition; Machine learning. | Accuracy in estimating ingredients, an ideal AI nutrition recommender system would be able to identify the type of food consumed by the user, providing as detailed a description as possible. For example, identifying a dish as Chicken Salad with Wild Rice instead of Salad. The model is yet to work on this. |
| Android based monitoring system with diet and calorie tracker | V. Ramkumar,S.Priyanga Devi , K. Laxmi Priya, M. Kavya Dharshani | 2022 | <https://www.ijert.org/android-based-monitoring-system-with-diet-and-calorie-tracke>r | Naive Bayes, Logistic regression, random forest. | Accuracy and image recognition problems. |
| A framework to estimate the nutritional value of food in real time using deep learning techniques | Raza Yunus∗ , Omar Arif∗ , Hammad Afzal∗ , Muhammad Faisal Amjad∗ , Haider Abbas∗ , Hira Noor Bokhari∗ , Syeda Tazeen Haider∗ , Nauman Zafar∗ and Raheel Nawaz | 2018 | <https://www.researchgate.net/publication/329953432_A_Framework_to_Estimate_the_Nutritional_Value_of_Food_in_Real_Time_Using_Deep_Learning_Techniques?enrichId=rgreq-70f6d1c41b297f8ce59800bd5ef8eb13-XXX&enrichSource=Y292ZXJQYWdlOzMyOTk1MzQzMjtBUzo3MzgxNTAwODMyMjM1NTJAMTU1MzAwMDEwMjc3MA%3D%3D&el=1_x_2&_esc=publicationCoverPdf> | Food Recognition: Recognizing food items from images. Attribute Estimation: Estimating food attributes of the recognized food item using textual corpus.  data augmentation, multicrop evaluation, regularization and other similar techniques. | Future endeavors in this domain can include the practical application of this work and more improvements in the android application with advanced features to make it a complete guide for everyday meals. |
| Application of artificial intelligence on nutrition assessment and management | Kavita Sudersanadas | 2021 | [EJPMR | ABSTRACT](https://www.ejpmr.com/home/abstract_id/8331#:~:text=Artificial%20Intelligence%20can%20be%20applied%20in%20multidisciplinary%20fields%2C,services%20to%20hospitalized%20patients%20is%20of%20immense%20scope.) | Artificial Intelligence, food and nutrient intake, hospitalized patients. | AI-based nutrient intake assessment system is of immense value to obtain and assess food intake data in isolation wards and for the follow-up without contact. Further research and developments in the application of AI on nutrition assessment and management are recommended. |
| Measuring calorie and nutrition from food image | Parisa Pouladzadeh, Shervin Shirmohammadi1, and Rana Almaghrabi. | 2014 | <https://www.academia.edu/en/10292029/Measuring_Calorie_and_Nutrition_from_Food_Image> | Calorie measurement, Food Image processing, Obesity management. | Problems in detecting mixed foods, segmentation step often fails to properly detect various food portions in mixed foods, illumination of food portions in a mixed food may be changed as they get mixed, making it harder to extract different food portions, the size of food portions in different mixed food are not similar, hence the method fails to segment food portions properly. |
| Image-based food classification and volume estimation for dietary assessment | Frank Po Wen Lo, Yingnan Sun, Jianing Qiu, Benny Lo. | 2020 | <https://ieeexplore.ieee.org/abstract/document/9082900/> | Dietary assessment, computer vision, 3D reconstruction, machine learning, object recognition, and mobile technology. | After a comprehensive review on several state-of-the-art food recognition systems, recent research has found to be focused on exploring the potential of assessing dietary intake based with deep learning approach. Overall, there is currently a growing potential in integrating different approaches to improve the overall accuracy in food volume estimation. If the challenges can be resolved, image-based dietary assessment will definitely play an important role in nutritional health monitoring in the near future |