

| S.NO | TITLE AND AUTHOR | YEAR | METHODOLOGY | ADVANTAGE | DRAWBACK |
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| 1 | <p>Artificial Intelligence Application in nutrition and Dietetics.</p> <p>Author: Feride Ayyildiz</p> | 1955 | <p>An artificial intelligence application in the field of nutrition and dietetics is a fairly new and important field. Different apps related to nutrition are offered to the use of individuals. The importance of individual nutrition has also triggered the increase in artificial intelligence apps. It is thought that different apps such as food preferences and dietary intake can play an important role in health promotion. Researchers may have some difficulties such as remembering the frequency or amount of intake in assessment of dietary intake. Some applications used in the assessment of food consumption contribute to overcoming these difficulties. The apps to be used in the field of nutrition and dietetics should be developed by considering the disadvantages. It is thought that artificial intelligence</p> | Better health outcomes, higher performance on test. Increased nutrient intakes. | Limitation in the reductionist approaches and opportunities for adoption of advanced computational data – driven technologies. |

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| | | | applications will contribute to both the improvement of health and the assessment and monitoring of nutritional status. | | |
| 2 | <p>A New Deep learning -Based food Recognition System for Dietary Assessment</p> <p>Author :Vinod vokkaran</p> | 2014 | <p>Automatic food image recognition systems are alleviating the process of food-intake estimation and dietary assessment. However, due to the nature of food images, their recognition is a particularly challenging task, which is why traditional approaches in the field have achieved a low classification accuracy. The model is being used in practice as part of a mobile app for the dietary assessment.</p> | Better monitoring and understanding of a population's nutritional status. | Data sparsity, missing data and need for improved imputation methods. |
| 3 | <p>Artificial Intelligence in nutrition research</p> <p>Melinacote</p> | 2021 | <p>In this review, we provide an overview of the main and latest applications of AI in nutrition research and identify gaps to address to potentialize this emerging field. AI algorithms may help better understand and predict the complex and non-linear interactions between nutrition-related data and health outcomes, particularly when large amounts of</p> | Better understanding of complex nutrition related data. | Data sparsity and missing data problem that emphasizes the need for the development of new methods for data imputation . |

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| | | | <p>data need to be structured and integrated, such as in metabolomics. AI-based approaches, including image recognition, may also improve dietary assessment by maximizing efficiency and addressing systematic and random errors associated with self-reported measurements of dietary intakes.</p> | | |
| 4 | <p>Artificial Intelligence in Nutrients science research</p> <p>Jaroslawn sak</p> | 2021 | <p>The aim of the article is to analyze the current use of AI in nutrients science research. The literature review was conducted in PubMed. It was found that the artificial neural network (ANN) methodology was dominant in the group of research on food composition study and production of nutrients. However, machine learning (ML) algorithms were widely used in studies on the influence of nutrients on the functioning of the human body in health and disease and in studies on the gut microbiota. Deep learning (DL) algorithms</p> | It may contribute to improving predictive models of diet and disease outcome. | Inaccuracies are still possible. |

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| | | | prevailed in a group of research works on clinical nutrients intake. | | |
| 5 | <p>Food Item Recognition and Intake Measurement Technique.</p> <p>Author: Hassan, Nanuman Zafar</p> | 2021 | The main aim of this review paper is to do a critical analysis of recent studies on accurate calorie estimation and food item recognition. We contribute to building a system that provides tools to monitor calorie intake by estimating calories based on food item recognition and accurate volume calculation | Creation of a global network that will be able to both actively support and monitor the personalized supply of nutrients. | The AI System may be buggy At First it can take time to work correctly. This is normal. |
| 6 | <p>Healthify Me.</p> <p>Author: Mathew Cherian</p> | 2012 | It consists of three components. First is its lifestyle tracker, as the first calorie counter in India. The second is its social feed, which allows users to find others like themselves, with similar goals and problems. The third, and most innovative aspect, is tech augmented coaching. | Healthify Me app serves as a calorie tracker, allowing users to lose weight and track their food and exercise regimens through their phones or computers, fitness experts and yoga instructors. | It cannot be creative in its approach. A classic These reports only contain data and facts already provided to the bot. |
| 7 | <p>A computer vision-based Indian food detection and nutrition calculation</p> <p>Author: Durgesh Samariya</p> | 2022 | The task of food detection/classification is not easy as it seems. All possible options related to the given Image. For example, if a user uploads a dal image then the Foodify.ai app return all dal's from our nutrition | Easy to use highly productive no more man power required. | Calculation cannot be accurate Software development is difficult image processing can always not be correct |

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| | | | database such as Dal Tadka, Dal Fry, Dal Makhni, etc. | | |
| 8 | Machine Learning Based Approach on Food Recognition and Nutrition Estimation Author: Zhidong shen | 2019 | This paper proposes a deep learning model consisting of a convolutional neural network that classifies food into specific categories in the training part of the prototype system. The main purpose of the proposed method is to improve the accuracy of the pre-training model. The paper designs a prototype system based on the client server model. The client sends an image detection request and processes it on the server side. | It is automatic and used in various fields, handles varieties of data. | Chances of errors or fault or more. It is time consuming and more resources required. |
| 9 | Android Based Monitoring System With Diet And Calorie Tracker Author: V. Ramkumar | 2022 | It serves as a calorie tracker, allowing users to lose weight and track their food and exercise regimens through their phones. | The fitness coach is an AI that can handle 77% of all user questions. | It is clearly lacking appropriate regulations and some political, ethical, and financial transformations |
| 10 | Computer learning based on food recognition system Author: Guanling Chen | 2019 | To maintain health and to have our health in good condition, everyone should take a diet. This work exactly fulfills this requirement. | Free immunity assesment test Works on a freemium Model. | AI cannot learn to think outside the box. AI is capable of learning over time with pre-fed data and past experiences, but cannot be creative in its approach |