AI-powered Nutrition Analyzer for Fitness Enthusiasts

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PROBLEM STATEMENT

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. Nutritional analysis is the process of determining the nutritional content of food. It is a vital part of analytical chemistry that provides information about the chemical composition, processing, quality control and contamination of food.

The main aim of the project is to building a model which is used for classifying the fruit depends on the different characteristics like colour, shape, texture etc. Here the user can capture the images of different fruits and then the image will be sent the trained model. The model analyses the image and detect the nutrition based on the fruits like (Sugar, Fibre, Protein, Calories, etc.).

LITERATURE SURVEY

S NO	TITLE OF THE PROJECT	DRAWBACK	ADVANTAGES	REFERENCE LINK
1	A New Deep Learning-based Food Recognition System for Dietary Assessment on An Edge Computing Service Infrastructure	In this project the data are stored in the local storage of the device	In this project IBM cloud to store the data instead of storing in local storage	https://ieeexplore.ieee.org/ielaam/4629386/8332642/7837725-aam.pdf
2	Precision Nutrient Management Using Artificial Intelligence Based on Digital Data Collection Framework	There is no proper assistance in this project	In this project IBM watson assistance to guide the user	https://www.mdpi.com/2076-3417/12/9/4167/pdf
3	Application Of AI on Nutrition Assessment And Management	In this project scalability is not up to the mark	In this project python flask allows better scalability to this project	https://www.researchgate.net/publication/357352908_Artificial_Intelligence_Applications_in_Nutrition_and_Dietetics
4	Validity and Usability of a Smartphone Image-Based	In this project CNN is not used	In this project CNN is used	https://pubmed.ncbi.nlm.nih.gov/

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6	Estimation of food portion sizes: Effectiveness of training	This project uses traditional statistical approach	In this project modern statistical methods will replace the traditional approach to generate more accurate results	https://www.sciencedirect.com/science/article/abs/pii/S0002822321079086?via%3Dihub
7	Building a case-based diet recommendation system without a knowledge engineer	In this project backup details is not recorded on the database	In this project backup details is recorded in IBM Cloud Foundry. So incase of any failure, the information will be automatically rollbacked to the latest checkpoint	http://sciencedirect.com/science/article/pii/S0933365702001136?via%3Dihub
8	Swasthya :The Virtual Dietician	In this project keras is not Used	In this Project We used Keras ,which is an open-source software library that provides a Python interface for artificial neural networks.	https://mscw.ac.in/NAAC/Criteria1/Samples-of-ProjectWork_Fieldwork/Computer_Science/software_Engineering/Group-5_SWASTHYA-%20THE%20VIRTUAL%20DIETICIAN/SWASTHYA-THE%20VIRTUAL%20DIETICIAN.pdf
9	A New Deep Learning-based Food Recognition	In this project fruits are in csv file format	In this project CNN is used to provide graphical	https://ieeexplore.ieee.org/ielaam/

THANK YOU