LITERATURE SURVEY

AI POWERED NUTRITION ANALYSER FOR FITNESS ENTHUSIASTS

TITLE	AUTHORS	PUBLICATION	INFERENCE
A New Deep Learning-Based Food Recognition System for Dietary Assessment on An Edge Computing Service Infrastructure	Chang Liu, Yu Cao, Yan Luo, Guanling Chen, Vinod Vokkarane, Yunsheng Ma, Songqing Chen, Peng Hou	IEEE Transactions on Services Computing,	Proper dietary assessment is necessary for keeping track of diseases like diabetes etc. This Deep learning based recognition model is based on transfer learning which identifies a food image and reproduces it's nutrient values, it uses edge computing service infrastructure.
DeepFruits: A Fruit Detection System Using Deep Neural Networks	Inkyu Sa *, Zongyuan Ge, Feras Dayoub, Ben Upcroft, Tristan Perez and Chris McCool Science and	*Sensors*. 2016, Queensland University of Technology	Fruit detection using dl: AI and neural networks play an important role in the field of nutrient sciences in which detection of nutrients in raw materials plays an important role. To detect nutrients in particular food the neural networks used in this paper is trained based on the images of thousands of fruits
An Artificial Intelligence-Based System to Assess Nutrient Intake for Hospitalised Patients	Ya Lu, Thomai Stathopoulou, Maria F. Vasiloglou, Stergios Christodoulidis, Zeno Stanga, and Stavroula Mougiakakou	IEEE Transactions on Multimedia	Malnutrition of hospitalized patients is a serious condition associated with increased infection, higher mortality, morbidity, prolonged length stay. In order to avoid this model which is based on AI
A review on fruit recognition and feature evaluation using CNN	D.N.V.S.L.S. Indira , Jyothi Goddu , Baisani Indraja , Vijaya Madhavi Lakshmi Challa , Bezawada Manasa	Materials Today: Proceedings	The paper focuses on fruit detection and fruit classification as it's main objective. It uses CNN to input RGB images of the fruit which are then processed by the CNN based on the data set on which it is trained and converted to fully connected neural networks and corresponding nutrient chart is given as output.

Analysis of visual features and classifiers for Fruit classification problem	Sumaira Ghazal *, Waqar S. Qureshi , Umar S. Khan , Javaid Iqbal , Nasir Rashid , Mohsin I. Tiwana	Computers and Electronics in Agriculture.	The paper focuses on automated fruit classification and it uses sorting as an important application in the area of fruit detection. CNN architecture is employed is Mobilenet V2. The highest accuracy reported under this architecture is 95%. The data set composed of images of fruits with white background. They have also used zoning and character edge descriptor combined with discrete Fourier transform. The features extracted by this paper for fruit detection includes color features,texture features shape features and the image classification is found using several classifiers like multi class support vector machine.

REFERENCE:

1. C. Liu et al., "A New Deep Learning-Based Food Recognition System for Dietary Assessment on An Edge Computing Service Infrastructure," in IEEE Transactions on Services Computing, vol. 11, no. 2, pp. 249-261, 1 March-April 2018, doi: 10.1109/TSC.2017.2662008.

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3. Y. Lu, T. Stathopoulou, M. F. Vasiloglou, S. Christodoulidis, Z. Stanga and S. Mougiakakou, "An Artificial Intelligence-Based System to Assess Nutrient Intake for Hospitalised Patients," in IEEE Transactions on Multimedia, vol. 23, pp. 1136-1147, 2021, doi: 10.1109/TMM.2020.2993948.

4. Indira DN, Goddu J, Indraja B, Challa VM, Manasa B. A review on fruit recognition and feature evaluation using CNN. Materials Today: Proceedings. 2021 Jul 26.

5. Ghazal S, Qureshi WS, Khan US, Iqbal J, Rashid N, Tiwana MI. Analysis of visual features and classifiers for Fruit classification problem. Computers and Electronics in Agriculture. 2021 Aug 1;187:106267.