Literature survey on

AI- POWERED NUTRITION ANALYZER FOR FITNESS ENTHUSIASTS

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Abstract

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. Nutrition 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. Nutritional Analysis ensures that the food has optimal requirement of vitamins and minerals wherein the examining of nutrition in food helps in understanding about the fat proportion, carbohydrates dilution, proteins, fiber, sugar, etc. Our project aims in monitoring and calculating the nutrition intake of the users. For this purpose, we make use of a set of data collected from the real time users. Even though our project focuses on Fitness Enthusiasts, commoners can also make use it. We make use of the visual and text input from the user and produces their respective nutrition details based on pre-collected data from the database. We hope this project would help its users greatly in tracking their daily nutritional intake.

BOOK / JOURNALS	AUTHOR'S NAME	INFERENCE
Artificial intelligence-based Food calories estimation methods in diet assessment research	Naimoonisa Begum, Ankur Goyal, Sachin Sharma.	This Chapter proposes a review of various AI-based food calorie estimation methodologies in diet assessment which are suggested to help the normal people and patients so that normal people and doctors could succeed to fight against diet-based health conditions.
Sport Nutrigenomics: personalized nutrition for athletic performance	Nancy Guest, Justine Keathley, Shelly M. Vanderhout, Ahmed El-Sohemy	This Article review the science of genetic modifiers of various dietary factors that impact an athlete's nutritional status, body composition and ultimately athletic performance.
Artificial Intelligence Applications In Nutrition And Dietetics	İzzet Ülker, Feride Ayyıldız	The main ideology of this paper is many researches faced difficulties of evaluating the food preferences and dietary intake that is, remembering the frequency or amount of intake in assessment of dietary intake. To overcome this the apps facilitate the work of researchers and provide more reliable results than traditional methods.
An Artificial Intelligence-based	Ya Lu, Maria Vasiloglou,	This paper propose a novel system based on

system for Nutrient intake assessment of hospitalized patients	Zeno Stanga	artificial intelligence to accurately estimate nutrient intake, by simply processing RGB depth image pairs captured before and after a meal consumption. It permitted fully automatic estimation of nutrient intake for each food type with a 15% estimation error.
Artificial Intelligence in Health Care: A Report From the National Academy of Medicine	Michael E. Matheny, Daniel Whicher, Sonoo Thadaney Israni.	The Promise of artificial intelligence in health care offers substantial opportunities to improve patient and clinical term outcomes, reduced costs, and influence population health. Current data generation greatly exceeds human cognitive capacity to efficiently manage information, and this article shows the likeliness AI to have an important and complementary role to human cognition to support delivery of personalized health care.
Use of Artificial intelligence in precision nutrition and fitness	Maria Helena Lopes, Danton D. Ferreira	This chapter provides a discussion about the importance of nutrition and fitness for health and well-being ; what is precision medicine, AI, precision nutrition and precision fitness; how AI could help with precision

		nutrition and precision fitness; decision-making algorithm for nutritional meal planning/ dietary menu planning; AI-based diet and supplements; AI used in genetic tests for precision nutrition and fitness; AI approach to nutritional meal planning for cancer, cardiovascular disease, obesity, T2D patients; AI-based nutrition and fitness support systems and apps and some challenges and future perspectives.
Nutri-Educ, nutrition software application for balancing meals, using fuzzy arithmetic and heuristic search algorithms	Jean-Christophe Buisson	Nutri-Educ is a nutrition software application. It aims at helping any person to balance their meals. More specifically, its main goal is to enable a user to describe a meal and assess its content, and in most cases to find a small set of acceptable actions which make it well-balanced and in accordance to the user's energetic needs