DIETPLUS+: PERSONALIZED AI DIETETIC RECOMMENDATION

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Abstract

Maintaining a healthy diet is important to maintain a healthy life. This affects one's physical wellbeing as well as mental wellbeing. Just as other domains, recommendation systems are used to predict and recommend diet plans for a specific requirement. These requirements can be either based on an illness or health goals. However, since the traditional diet recommendation systems are performing and recommending generic diet recommendations, personalization was lacking in these systems. Furthermore, diets are generally prescribed after considering a patient's allergic reactions to food as well. Therefore the effectiveness of generic diet recommendation systems was low.

The DietPlus system is based on the hypothesis of the combination of Partitioning Clustering Algorithms with Gaussian Classifiers to increase the performance of a recommendation system. The system is making the recommendation by taking user preferences, allergy concerns and health goals. It uses a BMI-AGE calculation with the user preferences to make the best possible recommendation possible. Even though this is the initial step into developing a personalized diet recommendation system, the system is proving to be an effective solution for the demand in personalized dietetic systems.

Key Words: Machine learning, Artificial intelligence, Dietetic consultations