Shed: An Online Diet Counselling System

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Abstract: In today's health conscious (or lack of health consciousness) society there is a need for a more personalized, tailor-fit solution for maintaining a healthy diet for users. There are already existing recommendation systems aimed at helping users maintain a healthier diet. However, there is no single software application which is capable of combining all the capabilities (i.e., diet information, recipe recommendation, and recipe information) and thus there is no consolidated source of assistance or reference. Furthermore, there is a lack of recommendations presented in natural language that are produced by existing systems which means that outputs are not yet tailor-fit for users. Because recommendations do not highlight the benefits of choosing appropriate foods, the users may therefore be given irrelevant information or incomplete information that could have motivated them to choosing a healthier meal.

This paper discusses Shed, our diet counselling system, that combines all the essential facilities of existing systems and provides live, on-the-fly healthy diet plan recommendations that are presented in natural language which would be aimed directly at the user's needs and interests. Shed generates personalized meal recommendations by identifying which recipe (available on-line) that promotes weight loss and maintenance. The basis for the recommendations is on the basal metabolic rate (BMR) of the user which determines the calories he/she must take for a day.

Also included in the paper is an overview of the data needed in the processing and the components that comprise the system. Lastly, we present some initial results from user acceptance test.

Key Words: Natural Language Generation; Recommendation System; Diet Plans