NUTRITION ASSISTENT APPLICATION

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ABSTRACT

Good health can be achieved by maintaining good behaviors such as a good night sleep, enough exercise and good nutrition. However, the competitive environment now a days prevents such good behaviors. Thus, this work aims to develop an application on mobile devices that is able to record the daily sleeping, exercise and nutrition information, analyze the collected information in order to provide a notification or an alarm, and present the analyzed results in a simple and easy to understand format. The proposed application can collect data from other application and from the users. A set of simple data analysis methods is performed on the collected data in order to provide a personal health advice based on the user pre-defined preferences.

INTRODUCTION

Better health can be achieved by maintaining a simple lifestyle such as a enough exercises and good nutrition. People spend one third of their lives sleeping however most people do not understand the importance of sleep. Moreover, the lack of sleep can affect a person's memory and emotion. The exercise habit and nutrition can also lead to good health. Daily working life can be affected by lack of sleep such as drowsiness and long-term health problems. Many researches have shown that not enough sleep or exercise can lead to many health problems such as GERD Alzheimer's disease, hearth disease, sleep apnea and insomnia. In the competitive work environment, nowadays, it is not easy for many people to manage good sleeping and exercise habits. With busy work and personal life schedules, many people indulge themselves in a bad sleeping habit such as sleeping very late or waking up very late especially in young adults and teenagers. A good night sleep can also be affected by the person's exercise habits and nutrition consumption. The sleep, nutrition and exercise have more complicated relationship than many people have realized Enough exercise helps people sleep better and good nutrition also lead to better mood and better health. Thus, can automatically record personal information, produce a warning, and give personal advices to its owner in order to maintain good sleeping, exercise and nutrition habits is needed. Today smart phone technology is a good candidate for this project because of its low cost, portability and capability which is similar or close to a personal computer. Moreover, a phone has become a typical device in daily activity. In addition, a current smart phone includes a lot of sensors such as an accelerometer, a microphone and a light sensor. These features make a smart phone suitable for collecting personal data in this work. Android is a Linux-based operating designed for touch screen mobile devices. Lately, Android becomes the world's most widely used smart phone platform. Especially, its customizable features allow Androids to be the software of choice for many developers.

LITERATURE REVIEW

Food recommendations for nutrition personalized according to individual health requirements are a major research gap identified by several food recommender systems surveys. Nowadays India is undergoing an impressive economic growth accompanied by a very slow decline, almost stagnation, in malnutrition levels. In developing countries, studies on dietary patterns and their relationship with nutritional status are scarce. Over the years some nutritional studies have been performed to explore different types of food consumed in various Indian regions, among different social samples. To review and describe trends in food and nutrition intake patterns in the different states of India. The review was carried out in PubMed, using the advanced research criteria: [food* OR ("meal pattern*") OR ("eating pattern*")] AND ("nutrient intake") AND India*. Food intake patterns showed that most of the Indians are vegetarians and that food items rich in micronutrients (pulses, other vegetables, fruits, nuts, oilseeds and animal foods) are generally consumed less frequently. Poor and monotonous cereals-based diet may promote inadequate nutrition intakes according to Recommended Daily Allowance (RDA) standards.

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