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CALORIE ANALYSIS AND DIET TRACKING

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ABSTRACT

Over the past few decades, obesity has become a serious problem. Obesity is associated with many of the leading causes of death, such as chronic diseases including diabetes, heart disease, stroke, and cancer. The most effective way to prevent obesity is through food intake control, which involves understanding food ingestion, including the nutrients and calories of each meal. To assist with this issue, this study develops a food calorie and nutrition system that can analyze deficiency of different nutrients and provide suggestions accordingly. The application in subject, provides a means for keeping a check on a person's daily eating habits by providing calorie intake information as well as providing suggestions of foods a person should be eating in order to maintain a nutritional balance. The main aim of building this project is to provide the public with an application interface that helps them to keep a track of their daily eating and drinking diet components and have a systematically prepared diet with appropriate nutritional information.

Keywords: Nutrition, Fat, Protein, Carbohydrates, BMI, Health, Fitness, Food Habits, Dietary Plan, Calorie Intake, Vitamin, Iron, Calcium.

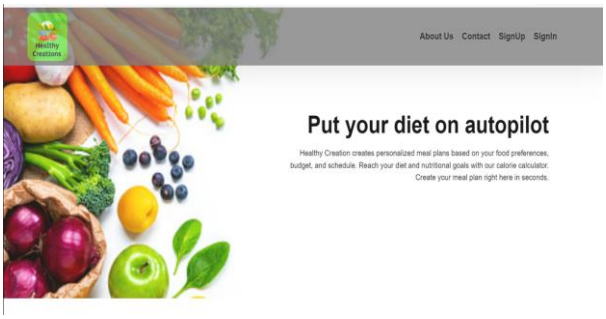
I. INTRODUCTION

Health professionals encourage the consumption of fruits and vegetables in our daily diet. Fruits are low in fat and are attractive options as part of a nutritionally balanced diet. Their volatiles are rich in pleasing ester notes, and their simple sugars are often well balanced with organic acids offering characteristic flavors. In addition to providing simple sugars, vitamins, minerals, and dietary fiber, fruits contain a number of bioactives, notably polyphenolics, which have supported health benefits. The application tracks a user's whole day consumption of food and accordingly determines the food suggestions based on his proteins, fats and carbs intake. The application in subject, provides a means for keeping a check on a person's daily eating habits by providing calorie intake information as well as the food suggestions and timely food reminders of what a person can consume as per his current physical needs.

II. METHODOLOGY

Nutrition analysis refers to the process of determining the nutritional content of foods and food products. The process can be performed through a variety of certified methods. Software is available as an alternative to laboratory nutrition analysis. This software typically utilizes a database of ingredients. The user can input ingredient data by matching their ingredients to ingredients found in the database; the analysis can then be calculated. In recent years, web-based nutrition analysis software services have become more popular. Online nutrition analysis allows users to access online databases and draw from certified ingredients to produce instant nutrition information.

IMAGES



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BODY MASS INDEX

- The body mass index is calculated using weight and height.
- A higher number means more fat and a lower means less fat.
- Enter your weight and height at the right to calculate your BMI.
- The range for good health is between 18.5 and 25; up to 28 is acceptable if over age 50.
- Obesity is from 30 to 40 and morbid obesity is over 40.
- Severe malnutrition is 17.5 and lower.

TABLES

1)Recommended value for protein (in grams) w.r.t age and gender

	FEMALE	**MALE**
1-3 Yr	13	13
4-8 Yr	19	19
9-13 Yr	34	34
14-18 Yr	46	52

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19-30 Yr	46	56
31-50 Yr	46	56
51+ Yrs	46	56

2) Recommended value for carbohydrate (in grams) w.r.t age and gender

	FEMALE	**MALE**
1-8 Yr	130	130
9-13 Yr	130	130
14-30 Yr	130	130
31-50 Yr	130	130
51+ Yrs	130	130

3) Recommended value for fibre (in grams) w.r.t age and gender

	FEMALE	**MALE**
1-3 Yr	14	14
4-8 Yr	16.8	19.6
9-13 Yr	22.4	25.2
14-18 Yr	25.2	30.8
19-30 Yr	28	33.6
31-50 Yr	25.2	30.8
51+ Yrs	22.4	28

4) Recommended value for fat (in grams) w.r.t age and gender

	FEMALE	**MALE**
1-3 Yr	**30-40**	**30-40**
4-8 Yr	**25-35**	**25-35**
9-13 Yr	**25-35**	**25-35**
14-18 Yr	**25-35**	**25-35**

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19-30 Yr	**20-35**	**20-35**
31-50 Yr	**20-35**	**20-35**
51+ Yrs	**20-35**	**20-35**

5) Recommended value for calcium (in grams) w.r.t age and gender

	FEMALE	**MALE**
1-3 Yr	700	700
4-8 Yr	1000	1000
9-13 Yr	1300	1300
14-18 Yr	1300	1300
19-30 Yr	1000	1000
31-50 Yr	1000	1000
51+ Yrs	1200	1200

6) Recommended value for iron (in grams) w.r.t age and gender

	FEMALE	**MALE**
1-3 Yr	7	7
4-8 Yr	10	10
9-13 Yr	8	8
14-18 Yr	15	11
19-30 Yr	18	8
31-50 Yr	18	8
51+ Yrs	8	8

7) Recommended value for vitamin (in milligrams) w.r.t age and gender

	FEMALE	**MALE**
1-3 Yr	15	15
4-8 Yr	25	25

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9-13 Yr	45	45
14-18 Yr	65	75
19-30 Yr	75	90
31-50 Yr	75	90
51+ Yrs	75	90

III. CONCLUSION

This application will help to provide users a detailed understanding of their daily diet and the changes that are required to maintain a healthy diet. It will be easier for users to get a hold of alternatives for their food habits while also maintaining the level of nutrition. There is a need for maintaining track of a person's daily food habits and accordingly formulate a desirable diet to maintain a healthy lifestyle. However, these functionalities are barely available under one roof. This application fulfills that requirement of a user. This application will help a lot of users to maintain a healthy lifestyle as the app will take care of how much the user eats and what he/she should be eating for a balanced food intake. This application will stand as a good commercial app in today's world. including a good combination of desirable features and workflow that will provide the best way of maintaining the user's health. Also further, the application will be flexible enough to include more add-on features. As this is an academic level project, we are using limited data and a .net server as an extensive database will not be financially feasible. However, if the project has to be enhanced commercially, we can create a cloud to maintain the extensive data.

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