**Artificial intelligence dietician**

**Introduction:**

The proposed system is an bot having artificial intelligence of diet plans. The system measures a user’s Basal Metabolic Rate (BMR) based on his/her height and weight. The user has to then enter his eating and the system presents him/her the diet plan that would be best for that particular user. All the food items along with the quantity is shown to the user. If the user doesn’t like the current diet plan, the system modifies food items keeping the total nutritional value same.

**Objective**: The objective of this project is to provide an online bot which suggests diet plan based on user’s height, weight and eating habits.

The system measures a user’s Basal Metabolic Rate (BMR) using his/her height and weight, age. The system has been trained with large dataset of food varieties and their nutritional values. Once the system has the user’s Basal Metabolic Rate (BMR) , it needs to know eating habit of the user. The user has to provide information about the **Activities Or Exercise he/she preform, Age, Weight, Height.** Once the system has this data, it suggests the user a diet plan as per the user’s Basal Metabolic Rate (BMR) . If the user doesn’t like the diet plan the system modifies the diet plan keeping nutritional value the same and gives you a suitable diet for breakfast, lunch, snacks, dinner, and other diet . This is done to ensure that the user likes the diet suggested to him. Thus the need to travel to a dietician to know the diet plan can be removed. The users can get a diet plan based on their Basal Metabolic Rate (BMR) if they know their height and weight and age. No need to pay a visit to local dietician any more.

**Modules:**

1: Admin Module  
Admin has to login before he/she can access the admin dashboard. The admin can view all the users and can search for a particular user using name or user ID. Any new features can be added the admin dashboard upon request.

2: User Module

The user has to login before he/she can access the system. New users have to register themselves first. Once the users have logged in they have to provide their height and weight. Once a user provides his/her height and weight, age, exercise he or she perform , the system calculates Basal Metabolic Rate (BMR) . Then the user needs to specify the timings at which he/she usually has lunch, breakfast, snacks and dinner respectively. Then the system presents a diet plan with all the food to be included in breakfast, lunch, snacks and dinner. If a user doesn’t like current diet plan the system presents him/her with a new diet plan with food different food items keeping the net nutritional value constant.

**Results**

On the basis of given inputs it will provide you the best suitable diet chart. The users can get a diet plan based on their Basal Metabolic Rate (BMR) if they know their height and weight and age. No need to pay a visit to local dietician any more. It suggests the user a diet plan as per the user’s Basal Metabolic Rate (BMR) . If the user doesn’t like the diet plan the system modifies the diet plan keeping nutritional value the same and gives you a suitable diet for breakfast, lunch, snacks, dinner, and other diet . This is done to ensure that the user likes the diet suggested to him. Thus the need to travel to a dietician to know the diet plan can be removed.

**Conclusion**

The users can get a diet plan based on their Basal Metabolic Rate (BMR) if they know their height and weight and age. Thus the need to travel to a dietician to know the diet plan can be removed. No need to pay a visit to local dietician any more.

**Methodology Used**

Step 1: Clean and prepare the data as per the requirements

Step 2: Input details from the user: Age (in years), Weight (in kg), Height (in ) and daily exercise level.

Step 3: Calculate Basal Metabolic Rate (BMR) using the Harris-Benedict Equations: Men BMR= 88.362 + (13.397 \* weight in kg) + (4.799 \* height in cm) – (5.677 \* age in years) Women BMR = 447.593 + (9.247 \* weight in kg) + (3.099 \* height in cm) – (4.330 \* age in years)

Step 4: Calculate the calorie intake using the following table:

Exercise level Daily Calories Required (Kcal/day) Little to no exercise Daily kilocalories needed = BMR x 1.2 Light exercise (1–3 days per week) Daily kilocalories needed = BMR x 1.375 Moderate exercise (3–5 days per week) Daily kilocalories needed = BMR x 1.55 Heavy exercise (6–7 days per week) Daily kilocalories needed = BMR x 1.725 Very heavy exercise (twice per day, extra heavy workouts) Daily kilocalories needed = BMR x 1.9

Step 5: Then we use randint(0,6) function to select items from list

Step 6: Recommend a diet plan based on the above steps. If not interested, look for an alternative plan using the defined rules by clicking on submit.

**Future Scope or Existing System:**

The existing system of getting a diet plan is completely manual. People need to visit their local dietician physically to know the suggested diet plan. The user has to wait for their appointment with the dietician. The user might have to wait for long hours some times. This makes it very inconvenient for the users to get their diet plan. They have to wait just to get the information about what they should eat. This is not efficient when looked from an end user’s point of view.