

# Personalized Nutrition Information using Mobile Application

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**Abstract--Traditionally, nutrition research has dealt with providing nutrients to nourish populations. Nowadays, it focuses on improving the health of individuals through diet. Modern molecular nutritional research is aiming at health promotion at performance improvement. Personalized nutrition is the concept of adapting food to individual needs. While it has become apparent that consumers respond differently to diet, depending on their genetic makeup, lifestyle and environment, the related knowledge and understanding remain fragmented. However, there is an increasing consumer awareness of understanding and assessing individual health status and nutritional needs. Responding to this changing consumer landscape, the nutrition business is developing products according to needs and desired benefits of specific consumer groups, be they healthy, at risk or diseased, such as sportive, elderly, diabetic, obese or allergic individuals.**

**The challenge in bringing personalized nutrition to the market lies in developing diagnostic, nutritional and service solutions. For example, measuring technologies are being evaluated in terms of their maturity and consumer accessibility.**

**Keywords--Modern molecular nutritio; metabolite profiles; nutritional conditions.**

## I. INTRODUCTION

Nutrition plays an important role in the human body. Great dietary examples are related with enhanced wellbeing and prosperity however many individuals think that it's hard to change their dietary patterns. Good sustenance is the key to physical and mental health. The amount and type of food we eat matters a lot for our body. But a lot of people are unaware about the nutrients that they should intake on a daily basis. Also there isn't a solution for people to find out the nutritional information about most of the food they consume. In this examination we tried a "customized sustenance" approach would be better in helping individuals enhance their diet. So this paper proposes a solution in the form of mobile application that will scan the food and display the nutritional information of it.

*Why eating regimen matters?*

Poor dietary examples prompt weakness and expanded danger of corpulence and an extensive variety of normal ailments including cardiovascular infection, cancer and type 2 diabetes. In spite of realizing that we ought to enhance our weight control plans by eating more vegetables and natural product, eliminating greasy nourishments and going simple on sugary beverages and

confectionary, many individuals think that its hard to make managed changes in their dietary decisions. Comprehending what we ought to do isn't sufficient. We require mediations which help us to make, and to continue influencing, suitable changes in what we to eat.

The "personalized" approach depends on the possibility that by "individualizing" guidance and support, each of us will be empowered and persuaded to roll out the dietary improvements which each of us as people need to make. So as opposed to giving non-specific guidance, for example, "eat no less than 5 segments of foods grown from the ground day by day" or "eat two segments of fish, one of which is slick fish, every week", a customized sustenance approach utilizes data about every person to determine exhortation and bolster significant for that person. Unless we are an indistinguishable twin, each of us is hereditarily one of a kind. We realize that our genotype connects with eating routine to impact wellbeing so perhaps we could utilize genotypic data to tailor dietary guidance.

## II. GOAL

The Personal Nutrition is a novel science-based way to deal with nourishment. We will probably control customized dietary intercessions that keep up sound glucose levels, crabs, and protein crosswise over human people.

## III. PROBLEM

Since various individuals have distinctive reactions to nourishment, we need to discover what our own reactions are and arrange for what we eat in like manner.

*What to eat, what not to eat?*

Understanding Complex Carbohydrates Sugary and starchy foods -- At the top of the pyramid for people whose bodies do not process sugars well are the foods which are rapidly converted into glucose.

*Must reduce these foods as much as possible:*

These include:

- Foods made with a lot of sugar (candy, soft drinks, etc.)
- Foods made with a lot of flour (cakes, cookies, crackers, etc.)
- Fruit juices

- High-sugar fruits (dried and tropical fruits have the highest amount of sugar)
- Some high-sugar condiments, such as barbecue sauce, ketchup, and salad dressings (check labels)

Alternative ingredient names used for sugar

#### *Low-Carb, Real-Food based diet (LCRF)*

The low carb, real food based diet involves eating natural, unprocessed foods with a low carbohydrate content.

#### A. *Low Carb Diet Meal Plan*

What foods you should eat depends on a few things, including how healthy you are, how much you exercise and how much weight you have to lose.

##### *The Basics*

**Eat:** Meat, fish, eggs, vegetables, fruit, nuts, seeds, high-fat dairy, fats, healthy oils and maybe even some tubers and non-gluten grains.

**Don't Eat:** Sugars, HFCS, wheat, seed oils, trans fats, artificial sweeteners, "diet" and low-fat products and highly processed foods.

##### **Foods to Avoid.**

You should avoid these 7 foods, in order of importance:

- **Sugar:** Soft drinks, all fruit juices (especially packaged), agave, candy, sweets, ice cream and many others.
- **Gluten Grains:** Wheat, spelt, barley and rye. Includes breads and pastas, rice, pastries, cereals, oats, roti/naan/chapatti. Care with daal.
- **Trans Fats:** "Hydrogenated" or "partially hydrogenated" oils.
- **High Omega-6 Seed- and Vegetable Oils:** Cottonseed, soybean, sunflower, grape seed oil, corn, safflower and canola oils.
- **Artificial Sweeteners:** Aspartame, Saccharin, Sucralose, Cyclamates and Acesulfame Potassium. Use Stevia instead.
- **"Diet" and "Low-Fat" Products:** Many dairy products, cereals, crackers, etc.
- **Highly Processed Foods:** If it looks like it was made in a factory, don't eat it.

#### IV. THE SOLUTION

We are gathering the wellbeing status, hereditary qualities, microorganisms, physical movement, and blood glucose reaction to sustenance of our examination members. We at that point utilize this novel information to

create PC calculations that foresee the individual blood glucose reaction of every individual to any feast.

#### V. HOW IT WORKS?

##### 1) *your sugar first:*

We initially record your glucose for one entire week to discover your own reaction to a wide range of nourishments.

##### 2) *Log your activities:* To discover what influences your glucose amid your sugar recording week, you will log your nourishment consumption, rest examples, works out, and other week after week exercises utilizing this App

##### 3) *Your personal food responses:* You will get individual forecasts of your reaction to numerous sustenance, and see your reaction to nourishments that you ate and to other logged occasions, for example, rest and exercise.

##### 4) *Your genetic makeup:* We will profile your DNA, and reveal to you how your own genome grouping may influence your reaction to sustenance

##### 5) *your personal microbes:* We will likewise quantify the arrangement of the 100 trillion microorganisms that dwell in your gut. These organisms influence your wellbeing, prosperity, and your reaction to sustenance.

##### 6) *Plan your diet:* Using our mechanized eating routine organizer, you will have the capacity to build an individual eating regimen that meets key nourishing necessities for vitamins and minerals while coordinating your sustenance inclinations, individual nourishment reaction, hereditary cosmetics, and microbial organization.

#### VI. CONCLUSION

Nutrition has traditionally been considered an integral part of health maintenance and disease prevention. The task is now to take personalized nutrition to the scientific level: protein and metabolite profiles of individuals in different health and nutritional conditions are analyzed. The goal is to reveal human body reactions towards different diets at protein and metabolite level in order to demonstrate nutritional efficacy. The vision of developing personalized nutrition for health promotion and disease prevention requires the construction of a sound scientific basis for this concept.

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