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Machine Learning: An Android based Application to Provide Diet

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ABSTRACT-*Good nutrition is important in the core aspects of the family, especially for people who work as a dietary supplement to good health, increasing their ability, growth and ability to continue. Thus, needing comprehensive assistance to provide them with solid nutrition may be the key to success. Just as people around the world want to see their weight, eat healthy, and avoid foods, a plan that says we can count calories and food in our daily diet is very helpful for our health. A calorie and diet plan are very beneficial for those who eat and maintain a daily meal with patients. Online Diet is an Android app with ML about human food. It almost acts like a dietitian like a true nutritionist. This method works similar to Dietitian. The person who understands their diet plan should provide the dietitian with other information, such as its somatotype, weight, height, and working hours. The system queries this information from the user and uses it to feed the user to determine. Therefore, the user is not used to visiting the meal plan, which saves time so that the user can access the defined meal plan with just one click. Keywords: Health, Food, Save Time*

1. INTRODUCTION

Android catering application that provides custom recipes to its customers. It works almost like a dietitian. This method works similar to Dietitian. A person who understands his diet plan should provide the dietician specific information, such as typing, weight, height, and hourly details. Similarly, this method also provides a diet plan that is not compatible with user-entered information. The system requests the user for all its information and uses it to provide the user with the food he or she decides. Therefore, the user does not need to visit any time-saving meal plan, so the user can find the specified meal plan with just one click. The program produces appropriate results because it accepts the information entered by the user and works based on some of the metrics already known to the supported application that the meal plan is made of and asks the user whether the user will accept the meal plan. If not approved, the program may offer another meal plan. This app not only provides the user with proper nutrition, but also gives the user all the exercise information. There is an information card to connect the entire fitness program with all the components. If a consumer wants to stay healthy and eat healthy, he / she can follow the program offered. The app also has a Health Facts card on home screen is the Health Information Card, which provides complete information and some amazing facts about our body parts and body parts. This exercise is sometimes an important part of the user's life if they want to take care of their health and body and follow the Diet Plan & Diet Plan offered by the user.

2. RELATED WORK

Bayes Papers and many other papers are connected to our health assistance project. We found some very interesting papers and, as is common in the book review section, we identified the main purpose of our project, and then started looking at the papers published in it to help us build the app. We went through a lot of IEEE; Gather information from them. In the current health care system, the physical and physical presence of the patient and physician is the first and most unpleasant necessity in every consultation. Also, the information is more likely to be misinterpreted and the source of errors. In addition, it can be difficult and time-consuming. With the increasing number of patients in health care facilities, the standard route of management is out of phase. As a result, a comprehensive health management system has become a demand for your time. Other systems are built specifically for the benefit of a disease such as Ob Bakam and Mongolism. While some are standard apps, some website projects are powered and some are mobile type. Our project is built on Android so that people can get a reliable UI and the app should be easy to use. Most apps are paid for use and some are free, we want to create our project for free. We started collecting information about the existing system and how it works, and working on standardized foods and calculating food based on personal information such as height, age, weight, gender. The web also helped us with tons of discovering some basics of ways to count whole foods and foods. A person's diet depends on what he or she does during the day. If he or she works hard, they will lose more calories compared to people who don't put in much effort, so we have to calculate that Kcal has supported the level of human activity. There should be a balanced component of

macronutrients such as protein, carbohydrates and fat with a ratio of 2: 2: 1. In the current health care system, the initial and unpleasant need for physicians' physical and patient presence in every consultation. Also, there is a high chance of misinterpreting information as 4 and due to errors. In addition, it can be difficult and time-consuming. With the increasing number of patients in healthcare facilities, the standard approach to management is out of phase. As a result, a comprehensive health management system has become a demand for your time

3. DESIGN & IMPLEMENTATION METHODS

3.1 Design

In this case, we have created an overview and discussed the implementation of the project. The modules are listed below for specific details.

Dashboard user

New food

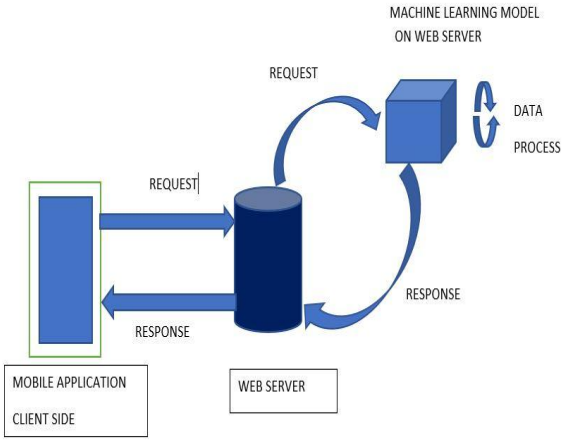
Work Outs

Health Facts

In the creation plan, we started by designing the flow of events that the app is working on, which can be seen in the flow below the design program, first by designing the flow of events running the app, which can be seen in the flowchart below. We need to style a user registration system that is ready to help for information on quantifying their data, we developed a registration and login system using SQL Server - a cloud-based system for storing our data and authentication, and using our algorithm. The interface is easy to use so the doc can help you use it. During the registration process, the app takes a small print of users such as age, height, weight, gender. The machine learning model processes the information and tells the user to grow, maintain weight, or lose weight

There is a dashboard card where the user can log in to view their details and edit / update the details. The Food Editing Card provides details of those who support the small print provided when the user signs up. All statistical modeling results were made by research and finding appropriate principles. The Workout Card is designed for an overview of the Android design system, provides a list of items, and changes or updates any aspects of the review.

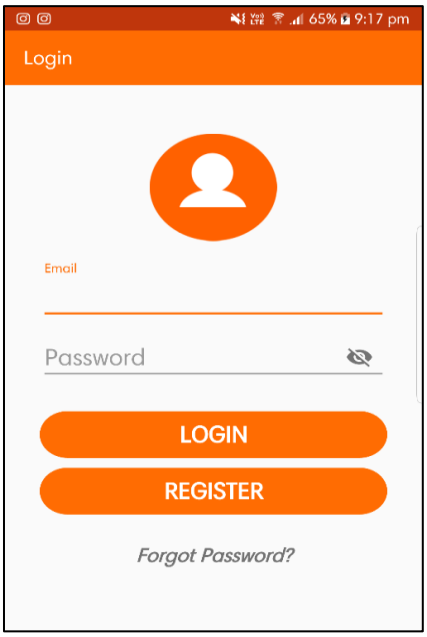
Figure 2. Architecture of the application

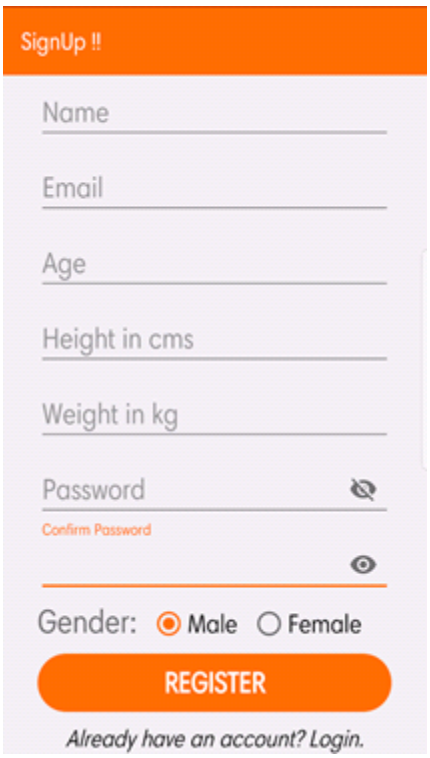


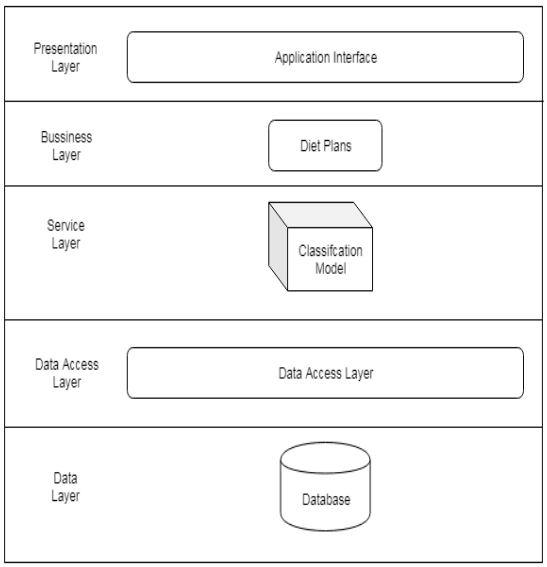
3.2 Implementation

The app was created using the Internet, Google's own studio, so that it can be started with the help of reference pages used. Android Studio documentation helped us implement some of the design elements of our app and added SQL Server Data API / WEB Server and Authentication. A few tutorials have helped us make a consistent application that works well.

APPLICATION USER INTERFACE:





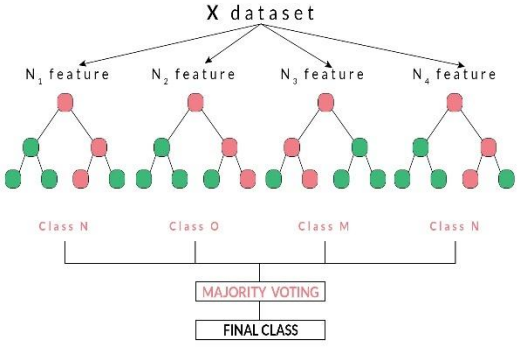


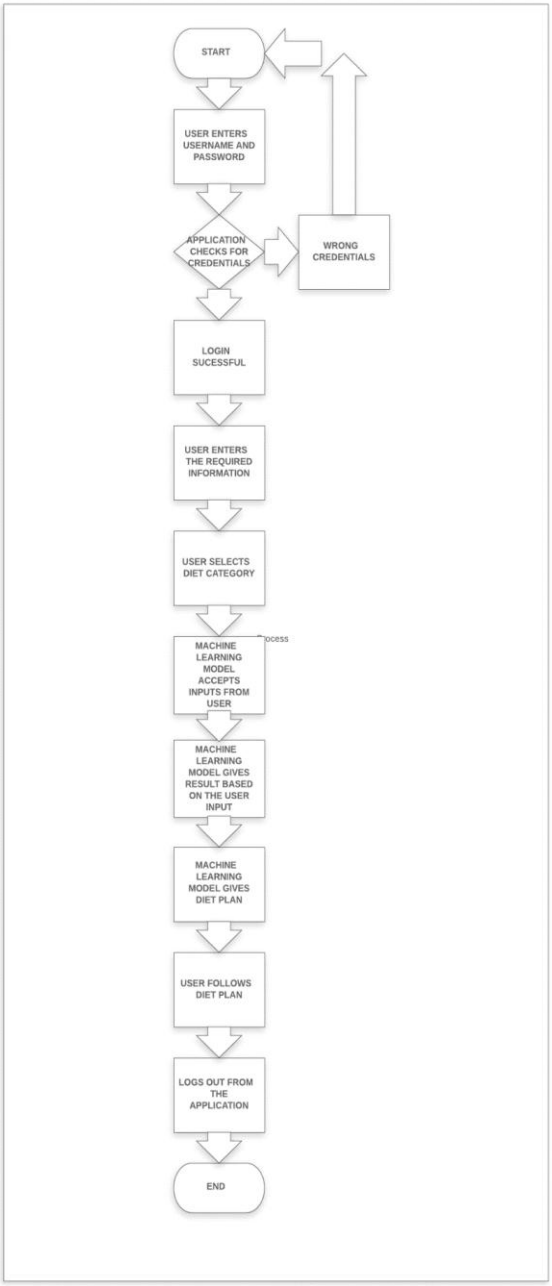
Architecture of the application

We have produced over 50 thousand data sets including age, gender, height, weight, BMI and dietary choices, including diet veg or anime products. The following data is set on Model Learning Machine: Training, Random Forest We have used multiple decision trees, Random Forest provides multiple random input to the Decision tree, then input provided by Decision, Random Forest and calculated votes for each target which user-defined foods are based on, user-based prediction based on food which is done for weeks and months

We used the HTTP Client API (HttpUrlConnection, OkHttp, Volley). with Django's environment in anaconda

Machine Learning Model: Random Forest





FLOWCHART DAIGRAM

FUTURE SYSTEM

• This program is often developed with the help of a nutrition expert who can help us create different types of specialty user programs.

• The project is expandable and can be enhanced with additional equivalent releases with Reinforcement Learning and with IOT Devices

EXAMINATIONS

[1] The Oxford handbook of nutrition and nutrition is edited by Joan Webster-Gandy, Angela Madden and Michelle Holdsworth

[2] 2456-3307, Talapanty Shweta, Vangari Sweta, Singh Deepali, Prof. Shrikant Sanas, Gaonkar Vaishnavi, "Artificial Intelligence Dietitian using Android", IJSR-CSEIT, Volume 2, 09-April2017. % 3DArtificial + Intelligence + Dieticia n

[3] 2456-3307, Talapanty Shweta, Vangari Sweta, Singh Deepali, Prof. Shrikant Sanas, Gaonkar Vaishnavi, "Artificial Intelligence Dietitian using Android", JSR-CSEIT, volume 2, 09-April2017.

[4] 305755235, Rodrigo Zenun Franco, Julie Anne Lovegrove, Rosalind Fallaize, Foustina Hwang, Software Related Nutrition Applications: Feature Testing, JMIR MHEALTH & HEALTH, Volume-4 Source, Aug-2016

4. CONCLUSION

o This paper presented is based on a nutritionist who uses Machine Learning that is used to support personalized bodybuilding goals by taking all the right foods into a few meals at home rather than meeting the actual breadwinner.

o Few important benefits are available:

o Customized diet of any lifestyle and age

o as well as the variety of foods to choose from that approve your pre-optimal macronutrient treatment conditions that confirm the proposals for adding a micronutrient depending on your diet.