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CUT-FIT Mobile Application Project

Nishanth A Shetty Chirag J Kulal Sharath Poojary

Students at AJ Institute of Engineering and Technology, Mangalore

Abstract :

The challenge of maintaining proper diet can be facilitated by the use of apps. Apps provide a infrastructure, which can be used to provide cost effective, high quality aids to behaviour monitoring. The apps have become an indispensable part of human lives. Apps can be accessed using various devices which have made the use of these apps. People are always seeking to have a healthy body fitness. Through this app user can manage healthy life system. This application is a one stop solution for all health related issues and monitor all lifestyles parameters. It has various functions like diet tracking, step count, workout routine, blood parameters, food intake, water intake, calories intake, daily activities, settings fitness goals, providing workout patterns, blood pressure, nutritional information about food's, information about some basic medicines.

Keywords: Health, Flutter application, Allin one fitness app.

I. INTRODUCTION

Mobile technologies are increasingly growing among this year; there have been several new researches and developments in this era. Most of the apps play an important role in one's day-to-day life.. The apps have become an indispensable part of human lives.

Cut-fit app is application designed to keep you fit and healthy. Being fit physically and mentally is every human being's ultimate desire. People are always seeking to have a healthy body fitness and they are somehow engaged in day to day life. So, our application can be great relief to people who do not have time to visit fitness centers, through help users can manage the healthy life system. The app helps users to identify their daily activities like running, walking, diet, etc. and analyse how it contributes to their overall fitness.

The aim of this app is to make your lifestyle healthier by tracking your food intake, water intake, calories intake, setting fitness goals, providing workout ideas and workout pattern. This app also keep track of your heart rate and blood pressure, which is beneficial for individuals with high blood pressure.

II. EXISTING METHODS

There are many application previously for Health Fitness app and monitoring of Health. For this proposed project there are some papers which influenced us to update and implement it in an efficient and functional manner.

A. *Endure: Augmented Reality Fitness Mobile Application*

Fueled by the need for a better healthcare system that could potentially bring about a significant change in our overall wellbeing, the Malaysian Ministry of Health (MOH) has transpired numerous methods in tackling this predicament. Nevertheless, there seem to be a recurring issue when it comes to the prevalence of chronic diseases related to excessive weight gain especially obesity, followed by heart conditions, that has been observed to increase the mortality rate of Malaysians over the years.

B. Low-cost Authentication Paradigm for Consumer Electronics Within the Internet of Wearable Fitness Tracking Application

The Internet has drastically changed the way we live, moving interactions between people at a virtual level in several contexts spanning from professional life to social relationships. The origin of the Internet of Things (IoT) can be traced back to the development of the Internet (interconnected network of computer networks). IoT is a novel paradigm that is rapidly gaining ground in the scenario of modern wireless telecommunications [2]

C. Experimentation of Gamification for Health and Fitness Mobile Application

In paper [3], the water is pumped from bore well to ground level tank based on the intensity of sunlight. The outlet valve of the tank is automatically operated by the controller which works according to the signals received from the soil moisture sensor placed in the field.

D. Understanding the Potential Risks of Sharing Elevation Information on Fitness Applications

From smartphones to wearable devices, various types of Internet of Things (IoT) devices are equipped with Global Positioning System (GPS), accelerometers and gyroscopes to allow applications to function or to present a better user experience by making use of geodata, such as location and elevation information

E. Development of a Gamified Cycling Mobile Application for Fitness and Touring with Community

Studies have shown that sports can play a role in that community integration and cultural understanding by enhancing relationships, even in areas of high conflict [1]. This relationship building through sports does not necessarily provide a vehicle for sports clubs to engage their members in promoting a healthy lifestyle for their members; in many cases, sports communities engage their members to simply provide a chance for them to play the sport [2]

F. Preventing Data Manipulation and Enhancing the Security of data in Fitness Mobile Application

Generally, the usage of mobile application is increased tremendously nowadays, and there are more advantage of app and developing more and more mobile applications for daily need use. When it comes to daily day application, there are plenty of users for these applications. Hence, there are

millions of consumers for each application.

G. Research on Fitness APP

The operation of logic, interface interaction, user experience and other aspects of the design needs to be taken into consideration. However, for users, the most intuitive feeling is UI APP, the most useful is the interface interaction. After all, media interface interaction level directly affects the athletes' exercise motivation and enthusiasm. So in order to realize the optimization of extracurricular sports fitness app, the most fundamental way is to achieve reasonable and reliable interactive interface, to meet the real needs of users

H. Security Evaluation of Android Mobile Healthcare and Fitness Applications

The behaviors of many Android healthcare and fitness applications cannot be expected and so, the users may download some bad applications on their devices. face the risk of downloading and installing bad apps on their devices. These health care applications interfere with and threaten the data and network security of users' devices.

I. Heart Rate Monitoring using Pulse Oximetry and development of Fitness Application

MAX30102 is an electronic device used for measuring the heart rate. It is very essential to continuously monitor the heart rate of the patients and athletes in order to determine the state of the heart. One of the most accurate ways of determining the heart rate is using the

Electrocardiography.

J. Permission Analysis of Health and Fitness Apps in IoT Programming Frameworks

The Internet of Things (IoT) consists of embedded devices (e.g. wearables and smart home devices) that generate data, and end applications (e.g. mobile apps) that consume data and optionally take actions. Programming frameworks have emerged which enable programmers to develop third party apps to process data. In particular, IoT programming frameworks for health and fitness-tracking are receiving more attention due to the popularity of wearables, smart watches and the proliferation of third-party IoT apps.

K. Large-Scale Mobile Fitness App Usage Analysis for Smart Health

Human workout activities have been demonstrated to have very important roles in our daily life. Frequent and regular workout activities prevent diseases such as cognitive decline, help to maintain healthy weight, and relieve symptoms of depression and anxiety [1, 2]. Understanding key factors that influence urban citizens' workout activities is important for developing public policy and planning cities to help citizens stay healthy [3–5]. However, it is very difficult to have deep insight on this problem with traditional sensing methods and limited data.

III. Conclusion

We have successfully designed and implemented a Cut-Fit the Fitness App using Flutter. This application has a user friendly screen that enables the user to use it without any convenience. This application is available for both Mobile and desktop users. Even if you don't come in with a defined goal in mind, you get to experiment with different types of workouts for free. so you can find out the types of exercise that make moving fun. The app provide All in One Health tool where one can monitor all lifestyle.

[10] Permission Analysis of Health and Fitness Apps in IoT Programming Frameworks.

[11] Large-Scale Mobile Fitness App Usage Analysis for Smart Health.

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[5] Understanding the Potential Risks of Sharing Elevation Information on Fitness Applications

[6] Preventing Data Manipulation and Enhancing the Security of data in Fitness Mobile Application

[7] Research on Fitness APP

[8] Security Evaluation of Android Mobile Healthcare and Fitness Applications

[9] Heart Rate Monitoring using Pulse Oximetry and development of Fitness Application

