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A SMARTPHONE APP FRAMEWORK FOR SEGMENTED CANCER CARE COORDINATION AND HEALTHCARE FOR DIABETES PATIENTS

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Abstract— ***Cancer is the second leading cause of death in the United States. Cancer care is a complex and complicated process involving diverse practitioners, multiple specialists, and a range of inpatient, outpatient, and home care services with numerous transitions for the patients. Cancer patients undergoing chemotherapy are at risk of unplanned emergency visits and hospitalizations and can benefit from care coordination. There is no such system which works on daily monitoring of the people having high sugar or diabetes. Moreover There is no such health monitoring system which will reduce the time consumption in treatments as well as prevent wastage of money .The purpose of making this application is to help people having high sugar, or Help normal people as well to prevent them from the causes of diabetes and cancer as well. The healthcare application is suggested at young school-children and mothers as they have affect on health problems affecting their family.***

Keywords—High risk health care monitoring, Medical risk assessment, Medical information retrieval, Mobile computing.

1. INTRODUCTION

This paper presents a framework of smart phone applications that provides such risk determination and follow-up care auditing services. This mHealth app framework build three useful modules: a natural language prepare module depend on Bayesian model to selection suitable data from free text or medical reports; a cancer risk calculator that uses device vector machine allocation to determine the medical risks of cancer patients based on the data extracted; and a health care monitor that supplies timely care designation to high risk cancer patients. The laboratory results validate mHealth as a positive medical risk estimate for post-surgical cancer patients and an effective health care auditing service for cancer care coordination. There is no such system which works on daily monitoring of the people having high sugar Or diabetes. Peoples in their busy schedules cannot pay attention on their health. Doing the treatments every time are the kinds of headaches. So the main purpose of developing this project is, this health monitoring system which will reduce the time

consumption in treatments as well as prevent wastage of money. In this day to day busy life, people used to ignore their health related problems, they usually continue with their problematic life style. Our motto is to help all the people weather they are having diabetes or they are having sugar level near about diabetes. The daily report will make them eat safely and exercise daily. We are also going to add an informational module in which we can give the information about cancer and diabetes. It will be helpful for those people as well who are in a healthy state, but in future they may get in such problem. So if they already know the reason behind the diabetes and cancer, they can take care of their own for the same by taking daily measures without wasting money on medicines as well as other treatments. One more module called alarm module can help the persons to take the medicines and the diet in time .For this they just need to set it and the alarm will rang whenever they need to take medicines. The application is going to be very powerful in at least the fields of diabetes and cancer.

2. EASE OF USE

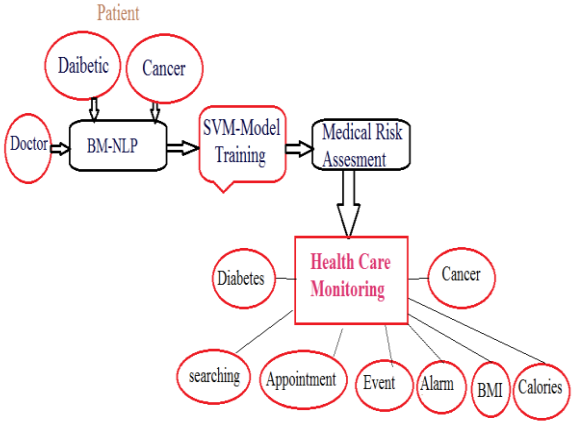
2.1 Background

Existing system does not works on daily monitoring of the people having high sugar or diabetes. There is no health monitoring system which will reduce the time consumption in treatment and wastage of time. And the existing system does not contain the Alarm module which helps telling the users to take medicines in time and the diet as well

2.2Motivation

In this day to day busy life, people used to ignore their health related problems, they usually continue with their problematic life style. Our motto is to help all the people weather they are having diabetes or they are having sugar level near about diabetes. The daily report will make them eat safely and exercise daily. We are also going to add an informational module in which we can give the information about cancer and diabetes. It will be helpful for those people as well who are in a healthy state, but in future they may get in such problem.

3. SYSTEM ARCHITECTURE



4. DESIGN OF SYSTEM

Software architecture refers to the high level structures of a software system, the discipline of creating such structures, and the documentation of these structures. It is the set of structures needed to reason about the software system. Each structure

comprises software elements, relations among them, and properties of both elements and relations.

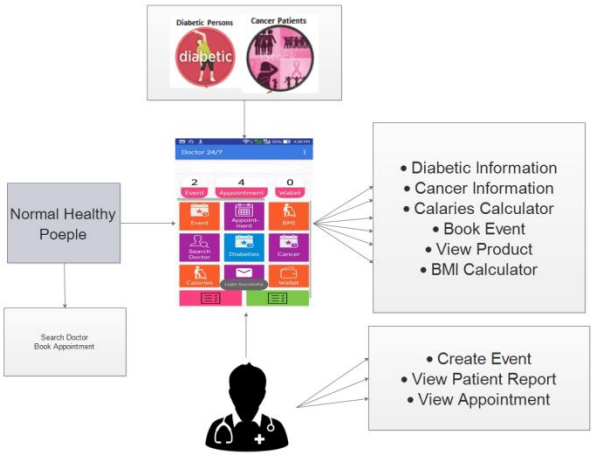
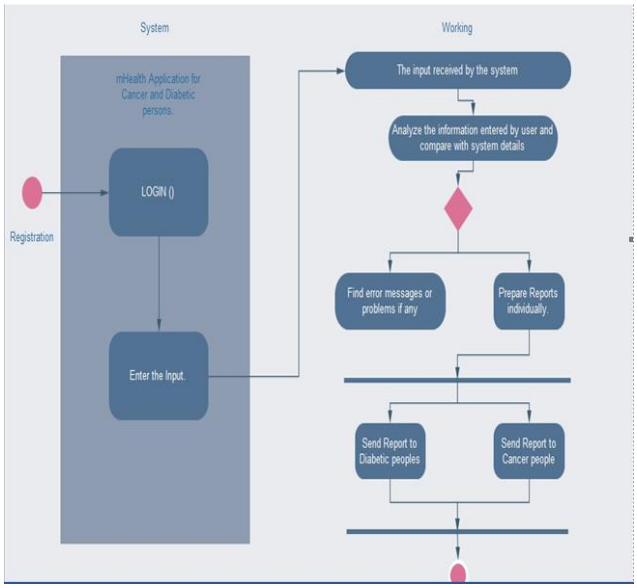


Figure2. Design of system

5. IMPLEMENTATION DETAILS

The front end technology being used will be Android. Android was released under the Apache v2 open source license. Android is an open source mobile operating system developed by Google and Open Handset Alliance (OHA). It is mainly designed for mobile phones with the touch screen facility such as Smart phones and tablets.



6. ALGORITHM

Algorithm for classification:

SVM Algorithm:-

Step 1: Start

Step 2: Get the input. (as a symptoms)

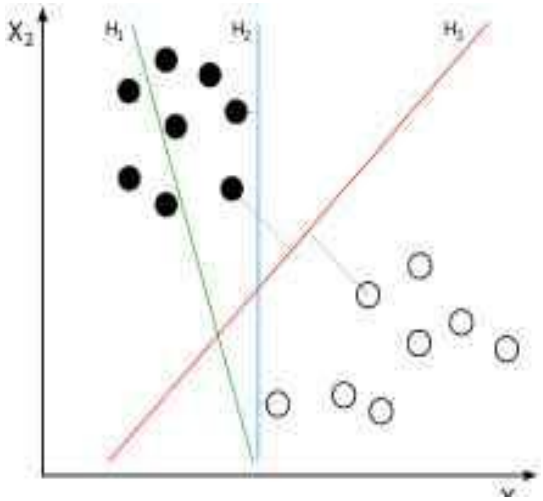
Step 3: Analyse the input with training data set.

Step 4: Normalise the data.

Step 5: Validation.

Step 6: Display result.

Step 7: Stop.



Hill Climbing Algorithm:-

Step 1: Start

Step 2: Get the input.

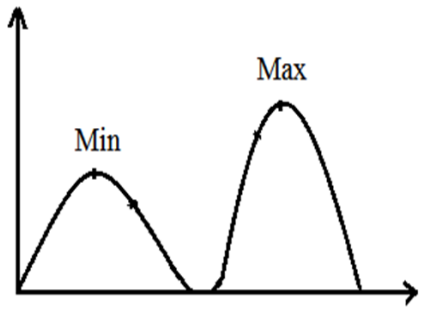
Step 3: Analyse the input with training data set.

Step 4: Compare the current result with n next result.

Step 5:If next result is less better than current result.

Step 6: Then current node is best node.

Step 7: Display result



7. TECHNOLOGY OVERVIEW

7.1 Android Development Tools (ADT)

Android Development Tools is a platform that provides a framework to develop new interactive applications. With the help of this tool, new developer can build various applications in very efficient way.

7.2 Android

It is a mobile operating system based on Linux kernel. It is low cost, modifiable and readymade operating system which helps the user to develop applications at user level. Main advantage of this system is that it provides default user interface which helps for direct manipulation without any developer interference. It has various functions as ability to create applications, develop and publish new applications as per user expectations

*7.3*Microsoft Visual Studio 2012 (For Web Services):

It is an (IDE) from Microsoft. Visual Basic Express 2012 has lots of new features than earlier version of VB. It is useful to develop the computer program, web application, web sites, web pages, web services and mobile apps. It support for new project templates for building Metro UI apps for multiple devices.

7.4 Windows Server 2008 R2 (For Database):

The back end technology will be SQL server 2008 R2. It is a server operating system produced by Microsoft. It can supports up to 64 physical processors or up to 256 logical processors per system. SQL Server Management Studio is an integrated environment for accessing, configuring, managing, and administering all components of SQL Server. Microsoft SQL Server 2008 R2 will provide support for geospatial visualization including mapping, routing, and custom shapes.SQL Server 2008 R2 provides lot many new features and capabilities for Business Intelligence users which can be leveraged by many organizations around the world.

8. MATHEMATICAL MODEL

Let S be a system that describes system to Cancer Care Coordination and diabetes patient's health care information.

S=[I,O,P,S,f]

1. Identify input as I

I = The input will Diet taken by patient.

2. Identify output as O

O= [O1, O2, O3]

O1= preventive measures

O2= diet

O3= recommend medicines

2. Identify the processes as P

P= [P1, P2]

P1= give Diet, medicine and health information from symptoms and diet taken

P2= Diet, medicine

3. Identify failure cases as False

F= Failure occurs when the system fails.

5. Identify success as S

S= [S1, S2]

S1=System shows medicines, diet and precautions.

S2=User Should become healthy.

9. RESULT

Figure 1. Login page of admin

Figure 2. Doctor Modul

Figure 3.Patient Module

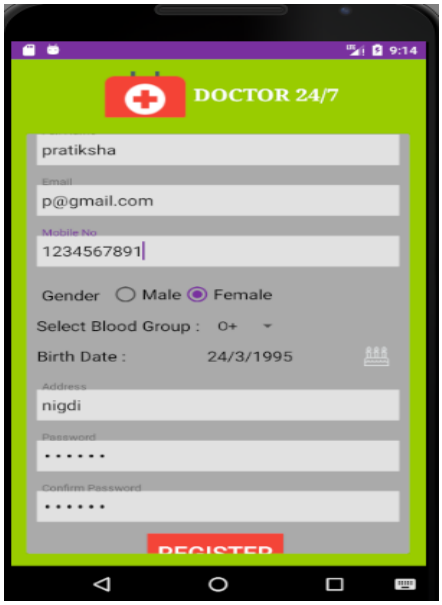


Figure 4.Patient Login

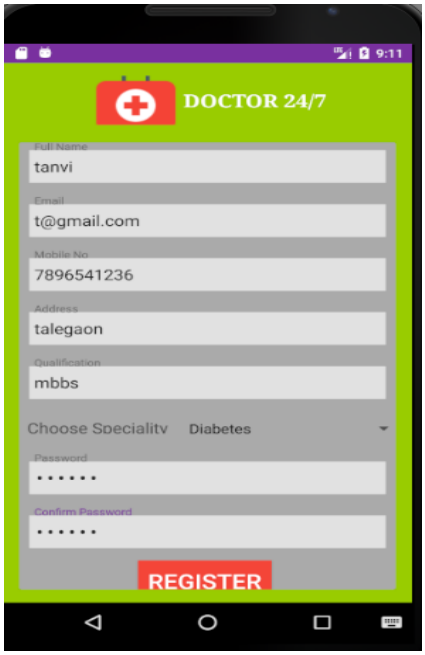


Figure 5.Doctor Login

10. APPLICATIONS

It is use by the users and the doctors. Alarm module help to take medicine on time. This can be beneficial for users having post surgery of cancer patients.It are beneficial for diabetic patients.

11. CONCLUSION

In this system, we will achieve the application will be helping people having High sugar, or to Help normal people as well to prevent them from the causes of diabetes and cancer as well. This application will be focusing on the cancer patients healthcare and the daily care for people having high sugar.

Alarm module will help in telling the users to take medicines in time and the diet as well.

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