



Smart Health Consulting Android System

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Abstract:

Nowadays considering a doctor is a difficult thing in our day to day life, but the availability of the doctor during the time of our requirement is unpredictable. In order to overcome this issue a proposal of Smart Health Consulting Android System which is an android application is given. This smart health application enables user to get instant report on their health issues through an intelligent health care application online. This E-health application enables user to express their symptoms and issues. It then processes users issues and symptoms to check for various health issues that could be associated with the symptoms given by the user. In this seminar we are going to discuss about the architecture of smart health consulting android system and its working. The Smart Health Consulting Android System Application is helpful for patient to search the hospital based on specialist. This application is simplify the task of patient and doctor.

I. INTRODUCTION

1.1. Motivation

Due to the rapidly increase in the mobile devices attached to the internet, a lot of researchers had been developed to manage and maximize the benefit of each integration. The general consideration about mobile devices are user looking for various services offered by mobile device, but we are now interested to provide such applications that will look forward Health Care and provide the remote diagnosis to patient and patient monitoring. We proposed the idea that mobile devices take care of the daily life health care issues by talking various checkup either by patient or by assistance that can to take his medical checkup by using g medical peripherals and upload the report by its mobile phone to server where expert system could suggest precautionary steps or diagnosis along with patient status. We have a lot of medical peripherals devices available around us that individually dedicate to some specific work like weight scale, blood pressure meter, pulse sugar level meter, peak flow meter etc. The modern visionary of healthcare system to provide better health to prepare at anytime and anywhere in the world in a more economic and patient friendly manner.

1.2. Objectives

Therefore for increasing g patient care efficiency, there arises a need to improve the patient monitoring system. Smart health consulting system that deals about the modern health issues which can be rectified using smart health consulting system. This application allows user to login and sign up screens. Then it proceeds to the search module where user can search related issues. If the database contains related issues it shows the prescription or else user not satisfied with it. They can make calls by clicking call option to consult the doctor. This application contains doctor as an admin and they maintain server. If there is no related result the user can send query to the doctor. Doctor can view all the queries from the user or patient's idea and update.

This System has following Modules:

- Registration

- Alarm system
- Doctor Fragmentation
- Emergency Fragmentation

II. LITERATURE REVIEW

The main aim of developing a mobile application is to maintain a health by knowing the related symptoms. This study provide many features that generally not available in a normal software like suggesting doctors as per the disease, symptoms and gives reference of mobile application which could help us to remind fit. It is a symptom checker module which actually defines our body structures and gives us liability to select the affected area check out the symptoms. This study focused on the developing on computerized system to check our health issue. In this paper the author describe the characteristics and outcomes of patient receiving a medical emergency team (MET). These review for the syndrome of acute change in conscious state and to access the effect to delay activation on their syndrome. An acute change in conscious state leading to a MET call carried a greater risk of death activation due to arrhythmias. Delayed activation was common fr both syndromes and was independently associated with an increased risk of death. The author indicated in this paper, a patient at a risk team to allow the early identification of seriously ill patients on hospital ward. Predefined psychological criteria were not able to reliably predict which patients would be admitted to the intensive care unit. Many critically ill ward patients have abnormal psychological values before intensive care unit admission. Identification of critically ill patients on the ward and early device and active management are likely to prevent the need for cardiopulmonary resuscitation and to improve outcomes.

III. PROPOSE SYSTEM

1. Naïve Bayes Classifier

This is classification technique based on a assumption of independence between predictors or what's known as bayes theorem. In simple term, a naïve Bayes classifier assumes that

the presence of a particular feature in a class is unrelated to the presence of any other feature. For Example, a fruit may be an apple if its red, round, and about 3 inches in diameter. Even if these features are dependent on each other or upon the existence of the other features, a naïve Bayes classifier would consider all of these properties to independently contribute to the probability that this fruit is an apple. To build the Bayesian model is simple, particularly functional in a case of enormous data sets. Along with simplicity, naïve Bayes is known to outperform sophisticated classification methods as well. Bayes theorem provides a way of calculating posterior probability $P(c/x)$ from $P(c)$, $P(x)$ and $P(x/c)$. This expression for posterior probability is as follows:

$$P(c|x) = \frac{P(x|c)P(c)}{P(x)}$$

Likelihood
Class Prior Probability

Posterior Probability
Predictor Prior Probability

$$P(c|X) = P(x_1|c) \times P(x_2|c) \times \dots \times P(x_n|c) \times P(c)$$

2. Dataflow Diagram

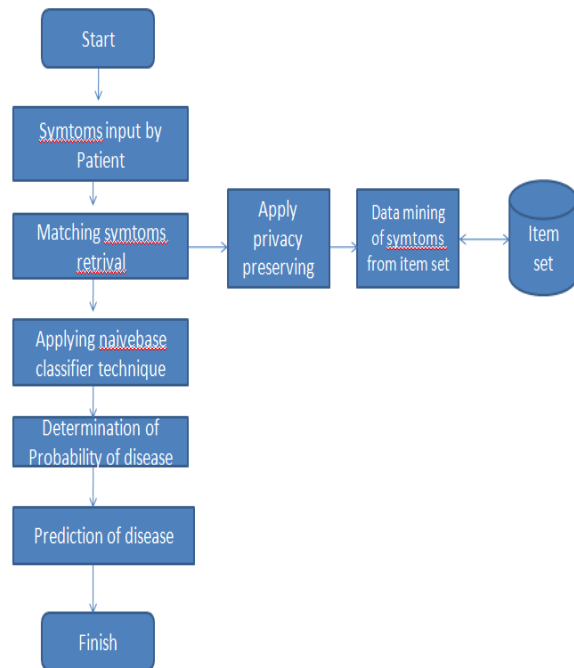


Figure.3.1. Data flow diagram of Working System

The following are the Steps-wise working of system:

Step 1: Patient will send his/her symptoms as input in the encrypted format using his/her public key.

Step 2: Using dataset will provide the historical medical data present in our database as Encrypted format using homomorphic Encryption Technique.

Step 3: At the time of processing it will decrypt this data and sends to Naïve Basian classifier for training. Once the training will be done the disease risk will be calculated based on the symptoms provided by the undiagnosed patient and the training result.

Step 4: After calculation, the predicted results will be send o the next level. On this level the probability of predicted disease risk will be calculated.

Step 5: If the patient wants predicted disease names then they can give their own preferences accordingly.

Step 6: In this algorithm the maximum probability disease risk will be calculated.

Step 7: Once the encrypted diagnosis result will get reached at the client side, the undiagnosed patient will decrypt these result by using his/her private key.

Step 8: Finally, proper predicted diseases will be diagnosis; this will help in giving proper prescription to the patients more effectively.

3. SYSTEM ARCHITECTURE

3.1. Patients point of view

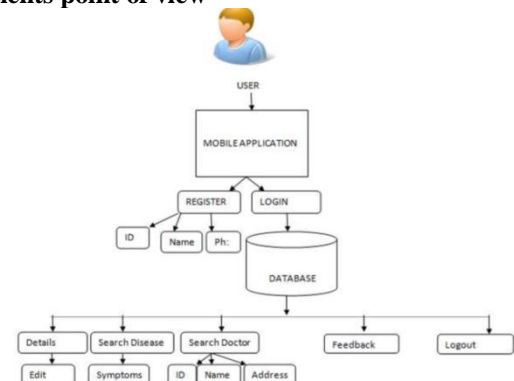


Figure.3.2. Information accessing through patient

3.2. Doctors Point of view

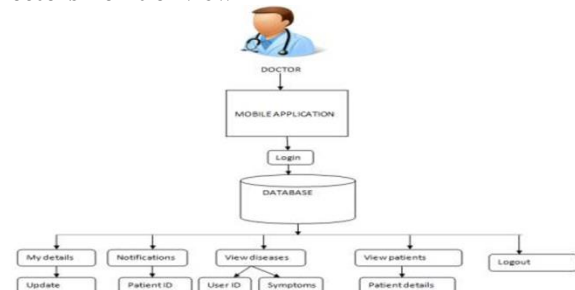


Figure.3.3. Information accessing and updation through doctor.

3.3. Admin Point of view

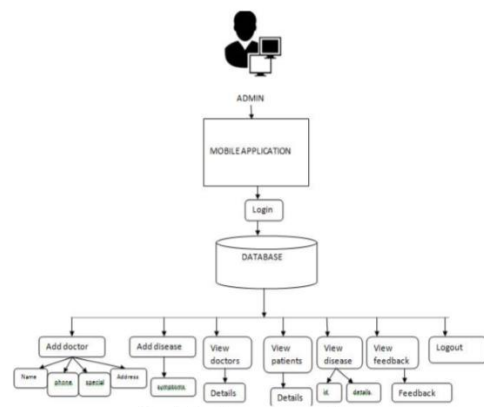


Figure.3.4. Information accessing and updation through administrator.

IV. CONCLUSION

The “Smart health consulting Android system” is helpful for patient to search the hospital based on specialist. This application will simply fulfill the task of patient and doctor. This application facilitates the interaction between patient and doctor. It helps to optimize the work of patient and doctor. Installation of the app in the smartphone is quite simple and more useful to patients who have normal idea of android smartphones. Smart health consulting android system is an effortless, efficient and influential mobile application for the society

V. REFERENCES

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