Smart Healthcare Prediction System

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Abstract: *In medical and health care areas, due to regulations and due to the availability of computers, a large amount of data is becoming available. Such a large amount of data cannot be processed by humans in a short time to make diagnosis, and treatment schedules. Health Care System is a web based application can be accessed throughout the specified department to handle the various processes involved in Smart health Prediction System where Patient can see various Doctor For their health issue, the system shows various essence. Software also lists various expert Doctors available where user can search Doctor for their medical issue. The ambition of developing this project is to provide medical guidance for a patient who wants to know about the Disease Symptoms. Healthcare is a sector where decisions usually have very high-risk and high-cost associated with them. The decisions related to health are crucial as it may cost a person his/her life. While diagnosing the disease doctor analyses the symptoms of the patient. Regarding the symptoms the final disease is predicted.*

Keywords: *Health; Application; Patient; Doctor; Disease; diagnosing; Healthcare*

I. Introduction

"Smart Health Prediction System" is the computerization of medical information to support and optimize

(1) administration of health services

(2) clinical care

(3) medical research

(4) training

It is the application of computing and communication technologies to optimize health information processing by collection, storage, effective retrieval (in due time and place).

The proposed system is mainly used by all the people where confidentiality and integrity of the data has utmost importance. Computer assisted information retrieval may help support quality decision making and to avoid human error. We are making an online web based application name as Smart Health Prediction System. Here we propose a system that allows users to get instant guidance on their health issues through an health care system online. The system is fed with various symptoms and the diseases associated with that system. The system is first taught with various symptoms and the disease associated with each system. The Health Prediction system is an end user support and online consultation project. The system contains data of various symptoms and the disease/illness associated *with* those symptoms. It also has an option for users of sharing their symptoms and issues. The system allows user to share their symptoms and issues. It then processes users symptoms to check for illness that could be associated with it.

II. Existing System

The current system is a manual and file based one, we realize that system. We are going to build must give the solutions for wastage of time and space which affect the efficiency of the daily activities performed at the hospital. In previous system there isno location tracker for patient and doctors. There is no any feedback system in existing system for taking a feedback from patient. If the patient requires an instant diagnosis on their disease then they have to go doctor but it is not possible to everyone to identify disease at home instantly. Today's health prediction system is so much time consuming.

III. Proposed System

To overcome the drawback of existing system we have developed smart health prediction System. The system design of the proposed system is shown in Figure:
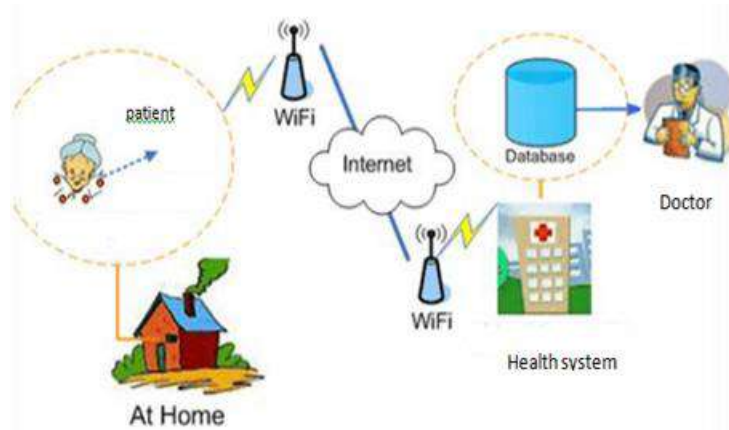
Figure 1. Proposed System Architecture

We have developed an expert system called Smart Health Prediction system, which is used for simplifying the task of doctors. A system checks a patient at initial level and suggests the possible diseases. It starts with asking about symptoms to the patient, if the system is able to identify the appropriate disease then it suggests a doctor available to the patient in the nearest possible area. If the system is not sure enough, it asks some queries to the patients, still if the system is not sure then it will display some tests to the patient. Based on available cumulative information, the system will display the result.

IV. Description

4.1 Admin Module
1. Admin login: Admin can login into the system using the id and password.
2. Add doctor: Admin can add new doctor details to the database.
3. Add disease: Admin can add various disease details along with its symptoms and type.
4. View doctors: Admin can view various doctor details along with their personal details.
5. View diseases: Admin can view various diseases details stored in the database.
6. View patient: Admin can view patients details who had accessed the system.
7. View insurance: Admin can add insurance plans for the patients and view insurance history

4.2 Patient Module
1. Patient login: Patient can login into the system using the id and password.
2. Patient Registration:- If patient is a new user he will enter his personal details and he will get user id and password through which he can login to the system.
3. My Details:- Patient can view his personal details.
4. View appointments:- Patient can view his appointment history.
5. Book appointments:- Patient can book his appointment with the doctors according to their convenience.
6. Diagnostics:- Details of every medicine, its details, dosage, quantity and preventive measures are provided here.
7. Ambulance:- It is available in case of emergency.
8. Laboratory tests:- Test centre details with the doctors list are provided here.
9. Edit Patient Record:- Patient can edit his personal details.
10. Disease Prediction:- Patient can specify the symptoms caused due to his illness. System will ask certain question regarding his illness and accordingly detect the disease based on the symptoms and also suggest doctors based on disease.
11. Search doctor:- Patient can search for doctor by specifying name and type.

4.3 Doctor Module
1. Doctor login:- Doctor login to the system using his user id and password.
2. Doctor registration:- Doctor can register themselves to the system.
3. My details:- Doctor can view his personal details.
4. Patient doctor records:- Doctor can edit his personal details.

V. Result

Thus, we have made an web based application which is useful for patients 24*7. The system would drastically reduce the human effort, reduce the cost and time constraint in terms of human resources and expertise, and increase the diagnostic accuracy.

VI. Conclusion

At end of this proposal we want to remember that this is fully unique system and we sure that it will helpful to all the patients. Hope this application will be very demandable in coming future

This system is used for medical data classification ,disease prediction, fixing appointments , availability of medicines ,ambulance facility , emergency consultation and health insurance.

The system would drastically reduce the human effort, reduce the cost and time constraint in terms of human resources and expertise, and increase the diagnostic accuracy.

Future Scope

Further, the application we made may be extended, by adding a link, for buying medicines online for predicted diseases, prescribed by doctors.

Also, features like,detecting the causes of the detected diseases can be added, sensors can be connected to detect the blood pressure and pulse rate online.

Application:

Our web based application can be used anywhere anytime where there is high speed internet. We can use this application at homes, at schools, collages,busses etc

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