

Research Paper on Smart Health Consultancy Management System

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Abstract

The rapid advancements in technology have paved the way for transformative innovations in the healthcare industry. Among these innovations, smart health consultancy systems have emerged as a promising solution to enhance healthcare services and improve patient outcomes. This research paper presents an abstract of a comprehensive study that investigates the development and implementation of a smart health consultancy system.

The objective of this research is to design and develop an intelligent decision support system that can assist patient to make decision for their health by predicating disease using machine learning technology as well as providing them option to check available hospitals and clinic near them. Showing all facilities offered by facility.

To achieve this, the research paper outlines the following key components of the smart health consultancy system: data collection and integration, data analysis and processing, Predication Algorithm, and user interface design. The system collects patient data from various sources such as electronic health records, wearable devices, and patient-reported information. The collected data is then processed and analysed using advanced machine learning techniques to identify patterns, detect anomalies, and extract meaningful insights.

The research paper also focuses on the evaluation and validation of the proposed smart health consultancy system. A pilot study involving healthcare professionals and a diverse group of patients will be conducted to assess the system's performance, usability, and impact on clinical decision-making. The study will consider factors such as accuracy, efficiency, user satisfaction, and patient outcomes to evaluate the system's effectiveness and potential for integration into real-world healthcare settings.

Overall, this research paper aims to contribute to the field of healthcare informatics by introducing a comprehensive smart health consultancy system that leverages advanced technologies to enhance healthcare services. The proposed system has the potential to improve patient outcomes, increase efficiency in healthcare delivery.

Keywords — Health Care, Smart Health Consultancy system, ML, Technology, data collection

I. INTRODUCTION

In The pandemic like Covid-19 there is lack of facility for treatment or some hospitals already have occupied with patients. In the pandemic family have to struggle to find hospital with facility which they needed they have to call each hospital one by one or go to them just for checking if they can admit their family members. Also, such pandemic people getting panicked with small disease like fever and cold. For this situation we through over web app we are try to connect with hospitals and doctors to online consultant facility check-up so we can reach to the help on time without any struggle. This project mainly focuses on the development of a system, or we could say an immediate medical provision that would incorporate the symptoms and other medical data collected from the patient and store them into a Smart health dataset. This dataset would then be analysed using the Naïve Bayesian machine learning algorithm to deliver results with maximum accuracy. GPS tracking will be used to suggest nearest doctor or specialist if the patient needs referral

II. EXISTING SYSTEM

Healthcare is one of the basic needs to everyone. However, the physicians are not genuine in terms of care and money with each patient. One more problem associated with the healthcare system is the fewer amounts of medical facilities to track the patient's history to provide the effective treatment. Therefore, it is necessary to optimise the healthcare system to make it more efficient. This paper highlights the literature review on different work done in healthcare area using Internet and applications.

Paper [1], It is android application of a smart medical assistant system is designed where doctors can record all prescriptions, treatment, or medical details of the patient on software instead of writing on a paper. All these records are stored in the central cloud and made visible to doctors as well as patients. Each patient has assigned a unique authentication card for maintaining the privacy of their medical history account. Doctors can access and update a patient's medical history anytime and anywhere by logging into their account through a smartcard swipe. The system can avoid overdue to treatment decisions. Likewise, the system helps to keep transparency about medicines and treatment.

Paper [2], Smart Health Care Prediction using Data Mining is a new powerful technology which is of high interest in computer world. It is a sub field of computer science that uses already existing data in different database to transform it to new researches and result. The actual task is to extract data by automatic or semi-automatic means. The different parameters included in data mining include clustering, forecasting, path analysis and predictive analysis. With the growing researching the field of health informatics a lot of data is being produced. The analysis of such a large amount of data is very hard and requires excessive knowledge. Smart health care applies data mining techniques for health diagnosis. Data mining refers to extracting meaning full information from the different huge amount of dataset. It is the process of determining the unseen finding pattern and knowledge from the massive amount of data set.

Paper [3], Smart Healthcare Monitoring System Using Wireless Body Area Network

Wearable sensors have gained significant attention due to tremendous promise for tracking of individual health and fitness 24hrs. Earlier the interaction between doctors and patients were through regular visits or text messages. Due to advent in Internet of Things continuous remote monitoring can be done without getting hospitalized is even made possible. There are countries which lacks skilled healthcare staff. The emergence of high technology devices has made our lives more convenient. People with physical disabilities such as paralysis solely depends on others for their movements. Smart wheelchair provides them remote health services and their health is monitored at regular interval which enhance their independence as they don't need to physically visit their doctor. They can even contact the doctor in case of emergency.

III. PROPOSED SYSTEM

This project mainly focuses on the development of a system, or we could say an immediate medical provision that would incorporate the symptoms and other medical data collected from the patient and store them into a Smart health dataset. This dataset would then be analysed using the Naïve Bayesian machine learning algorithm to deliver results with maximum accuracy. GPS tracking will be used to suggest nearest doctor or specialist if the patient needs referral

The purpose of this technique is to supply prediction for the overall and more commonly occurring disease that when unchecked can become fatal disease. The system applies data mining techniques and Naïve Bayesian algorithm. This system will predict the most probable disease supporting the given symptoms and measures required to avoid the hostility of disease. In this project, the system will be trained using machine learning.

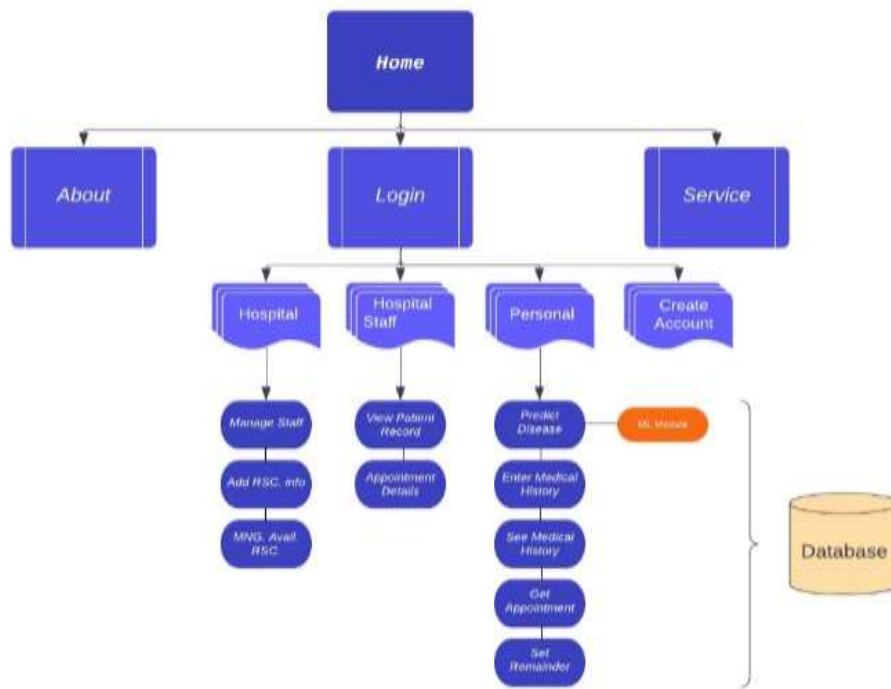


Fig.1 System Architecture

1.Login

Three Types of rolls are offered by the system:

1. Hospital(admin): main login for hospital management.
2. Hospital Staff: Login for hospital staff such as doctor
3. Personal (end users): End users of system.

2. Hospital:

1. Manage Staff: Adding, Removing and updating staff details. Creating logins for doctors.
2. Add Res Info: Adding or showing services offered by hospitals to patients (end users).
3. MNG Avail Res.: Manage available resources updating info of busy resources and available resources.

3. Hospital Staff:

1. View patient disease history/ Medical History.
2. Approve or reschedule appointment with patient.
3. Adding Medications and disease data if required.

4.Personal

1. Predict Disease: Taking referral or clue of disease based on symptoms of disease using machine learning.
2. Entering Medical data and Medication if hospital is not registered.
3. Apply for the Appointment with doctor in a particular hospital.
4. Setting remainder for the medicine.

IV. Result



Fig.2 Login



Fig.3 Disease Predication



Fig.4 Dashboard Manage Resource

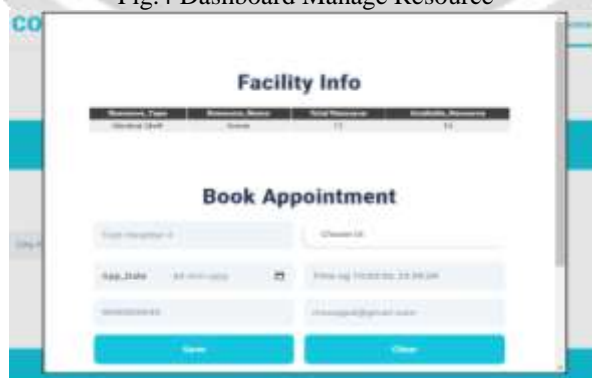


Fig.5 Appointment Booking

V. CONCLUSIONS

The “Smart health consulting” System is helpful for patient to search the hospital based on specialist. From This Project, develop unique, Flexible platform, which collaborate All Medical System

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