Cloud based Health Prediction System

Nishant Kumar[1], Dr. Bhuvana J[2]

[1]MCA, School of CS & IT, Jain University, Bangalore, India.
[2]Professor, School of CS & IT, Jain University, Bangalore, India.

---***---

Abstract – *This paper purpose to establishment of a cloud-based health prediction application and defines components that make a health prediction system. Users can use this cloud-based web application at any time when they feel uneasy in their health and still try to ignore it. They can visit to the application and provide details of their issue and some information which is related to their body like weight and height and based on that our system will give the accurate issues which is related to their health. There is no restriction for access services.*

There is very good and attractive c l o u d b a s e d web application which is very user-friendly and provides user easily to understand and use it effectively. web service is secure and personalized. web application is designed user friendly there is not any hidden feature and user can easily access this web application. there are very faster and effective communication between users and application server.

Key Words: AWS ,Cloud Based, CSS, Database, Health Prediction, html, Smart Health, JavaScript, MySQL, php.

1. INTRODUCTION

The health industry has been growing a lot from past few years.

People's health is one of the most important factors contributing to economic development in any economy. The most important and immediate effects of global degradation take the form of damage to human health.

This procedure has gained great importance in the medical field. It has been estimated that a care hospital can produce five terabytes of data per year.

So, in order to overcome problems where people ignore their health problems, we have designed user friendly application which helps users to get diagnosed from their residence at any time.

Application also provides an option for booking an appointment with the doctor to discuss health related problems and get diagnosed properly.

2. PROBLEM STATEMENT

Today people are very busy with their health and do not care about their health, they take action only if it is some serious issue and it's only because either they don't have much time or they don't want to spend much time in the place where they are not getting anything.

Peoples are only thinking about their financial conditions and also how to grow it day by day but by thinking that they also ignore the problem what they face in daily life and simply ignore them without any specific reasons.

From this application user can easily identify the problem what they are going through and the interesting part is user can access it from anywhere and anytime, it won't take much time and user don't have to go in the queue or wait for long to get appointment and meet with doctor.

This web application saves the time as well as money of users. They have no need to spend thousands of rupees on hospitals if they have minor issue.

3. LITRATURE WORK

[1] This paper introduces a review of the application of the Apriori Algorithm to data sets using the machine learning tool. Ruijuan Hu outlines the concept details of two common data steps using Apriori algorithms and the Association Rules. This speaks to a new development called Improved Apriori Algorithm to eliminate the evils of the Apriori algorithm. Gitanjali J, et.al proposes the study of large data sets from various angles and the acquisition of useful information context. These methods are useful in diagnosing and providing effective treatment. Krishnaiah et.al. aims to address the various methods of data mining in decision-making processes and to provide a detailed discussion of treatment. Data mining techniques can improve a variety of clinical guessing angles. Dan A. Simovici suggested that organizational rules represent information in data sets as a result and is directly related to the calculation of common sets of items. Mohammed Abdul Khaleel argues that data mining as a concept that reads large amounts of data and extracts patterns can be translated into useful information.

[2] The tendency to use data mining in health care is very good, because the healthcare sector is rich in information, and data mining becomes a necessity. The use of information technology allows automatic data extraction processes that facilitate the acquisition of interesting and common information, meaning the completion of manual tasks and the easy retrieval of data directly from electronic records, transferred to a secure electronic system of life-saving medical records. and reducing the cost of health care services, as well as the early detection of communicable diseases through improved data collection. Data mining can enable health care organizations to predict trends in a patient's condition and behavior, which is achieved by analyzing data from different perspectives and gaining connections and relationships from seemingly imaginative information. Raw data from health care organizations is plentiful and varied. They need to be collected and stored in an organized foiiDS, and their integration enables them to focus on the hospital information system. Healthcare data mining offers many opportunities for hidden pattern investigations from these data sets. These patterns can be used by physicians to determine the diagnosis, prognosis and treatment of patients in health care organizations.

[3] The paper states that health facilities are able to use data mining applications in a variety of areas, such as clinicians using patterns by measuring clinical indicators, quality indicators, customer satisfaction and economic indicators, practicing physicians in many perspectives to improve. resource utilization, cost-effectiveness and evidence-based decision-making, identifying high-risk and early intervention patients, improving health care, etc. information.

Data mining provides a link between continuous data information, such as biomedical signals collected from patients in emergency care centers, and develops an intelligent monitoring system that sends reminders, warnings, and alarms to pre-selected emergency situations. Applying the rules of the organization involves obtaining all the rules, or at least part of the basic principles that mark certain information as a result or as a prelude. This type of problem is of particular interest to health professionals seeking a relationship between disease and lifestyle or demographics or between survival and treatment rates.

[4] This paper presents an analysis of various data mining procedures that can help medical analysts or physicians to diagnose accurate heart diseases. The main method used in our work was published research, journals and reviews in the fields of computer science and engineering, data mining and cardiovascular disease in recent times.

This paper aims to analyze the various data mining methods introduced in recent years to predict heart diseases. Notes indicate that Neural networks with 15 attributes are more efficient than all other data mining techniques. Another

conclusion from the analysis is that the decision tree also showed good accuracy with the help of a genetic algorithm and a small set selection. The tendency to include data mining in health care is very good, because the healthcare sector is rich in information, and data mining becomes a necessity. Healthcare organizations produce and collect large volumes of info1mation on daily basis. Use of information technologies allows automation ofprocesses for extraction of data that help to getinteresting knowledge and regularities, which means the the completion of manual operations and the easy removal of data directly from electronic records, transferred to a secure electronic system for future medical records lives and reduce the cost of health care services, as well as the early detection of infectious diseases through an improved collection of data. Data mining can enable health care organizations to predict trends in patient condition and behavior, which is accomplished by data analysis from different perspectives and discovering connections and relations from seemingly umelated info1mation. Raw data from health care organizations is plentiful and varied. They need to be collected and stored in the organized foiiDS, and their integration enables fo1ming of hospital info1mation system. Healthcare data mining offers many opportunities for hidden pattern investigations from these data sets.

[5] Heart disease is the major cause of death today. The treatment of patients with heart disease has been improved, for example with machine-to-machine (M2M) technology to enable remote patient monitoring. In order to use M2M to care for a remote heart patient, its medical condition should be adjusted periodically at home. Therefore, it is difficult to perform complex tests that require doctors to help. In the meantime, heart disease can be predicted by analyzing some of the patient's health parameters. With the help of data mining procedures, the prognosis for heart disease can be improved. There are some algorithms used for this purpose such as Naive Bayes, Decision Tree, and k-Nearest Neighbor (KNN). This study aims to use data mining techniques in predicting heart disease, with simplification parameters to be used, for use in M2M for the purpose of monitoring remote patient. KNN is used as a parameter measurement to improve accuracy. Only 8 parameters (of 13 recommended parameters) are used, as they are the simplest and fastest parameters that can be measured at home. The result shows that the accuracy of these 8 parameters using the KNN algorithm is good enough, compared to the 13 parameters with KNN, or even other algorithms such as Naive Bayes and Decision Trees.

[6] As one of the key strategies in Prognostics and Health Management (PHM), accurate predictable Survival of Living Life (RUL) can effectively reduce the amount of rest time and significantly improve economic benefit. In this paper, the standard RUL prediction method is proposed for complex systems with multiple Condition Monitoring (CM) indicators. The stock corruption model is proposed to reflect system-damaging behavior, based on where consecutive reliability

factors such as RUL and Confidence Interval (CI) are clearly identified. Considering the destructive model, the two desirable areas of Health Indicator (HI) are prioritized and their value assessment methods are improved. With the desired structures, an indirect data aggregation method based on Genetic Programming (GP) is proposed to create a highly compact HI compound. In this way, more CM signals are integrated to provide better guessing power. Finally, the proposed integrated approach is validated in the C-MAPSS data set for aircraft turbine engines.

[7] Timing strategies: public health monitoring, risk group identification, risk factor assessment, and implementation / evaluation program. The ability to predict which individuals are at high risk of injury (or produce injury) and the limited performance and cost of other prevention strategies is the basis for decisions that influence the nature and focus of public health prevention strategies. In order to develop a knowledge base on which to base decisions on violence prevention strategies, the following activities should be prioritized: (a) to conduct surveillance programs related to violence against individuals; (b) directly identify groups at risk of non-lethal violence; (c) use case management techniques to assess potential risk factors for injury and violent behavior; and (d) a careful review of existing programs aimed at preventing social violence or altering the alleged threat of violence.

[8] As a emerging technology and business paradigm, Cloud Computing has taken commercial computing by storm. Cloud computing platforms provide easy access to the company's most efficient computer and storage infrastructure through web services. With cloud computing, the goal is to hide the complexity of IT infrastructure management for its users. At the same time, cloud computing platforms offer high throughput, 99.999% reliability, high performance, and precise configuration. These capabilities are offered at a lower cost compared to dedicated infrastructure. This article provides a quick introduction to cloud storage. It integrates key technologies in Cloud Computing and Cloud Storage, a few different types of cloud services, and explains the advantages and disadvantages of Cloud Storage after the launch of the Cloud Storage Reference model.

[9] Peng Z et al., Examined genetic embryonic stem cell (ESC) genes. signatures value to estimate survival Prostate cancer patients (PCa) at the time of their diagnosis. Ku research, a total of 641 ESC gene predictors (ESCGPs) identified using microarray data sets. Measurement survival neighbor near k (K-NN) using an algorithm estimating total survival [84].

[10] This paper proposes a general design of the cloud storage system, analyzes the functions of components, and discusses important technologies, etc. Cloud storage is a novel storage mode novel service providers that provide storage capacity and data storage services via the Internet to customers; For now, clients do not need to know the details and discounted structures and methods. The proposed cloud storage structure is horizontal and cohesive, and the main technologies discussed involve utilization, virtualization of storage, data editing, migration, security, etc. An operating system that combines ecological sequences, game theory, ant colonization development, data life cycle management, storage and updating, integration and evolutionary methods are also analyzed. So a complete and innovative view of the cloud storage system is presented.

4. DISCUSSION

In our paper, here we have developed cloud-based application for a more effective way to deal with healthcare system. Cloud provides us a flexible feature, cloud computing is vital to helping businesses and people deliver on and realize the promise of digital transformation.

By using HTML, cascade, and java script I created my user interface. we also can use the looping feature in HTML du to that we can use a small code for a long slider or any module that we have to repeat. MySQL offers to store data in database.

The flow of my model cover end-user i.e., user/customer. Customer/User can visit to the application and can fill the required details based on the issue they simply ignore or they want to check and then user's data will be analyzed with our database and based on the match the application will provide the report and also doctor details if there is major problem with their health .
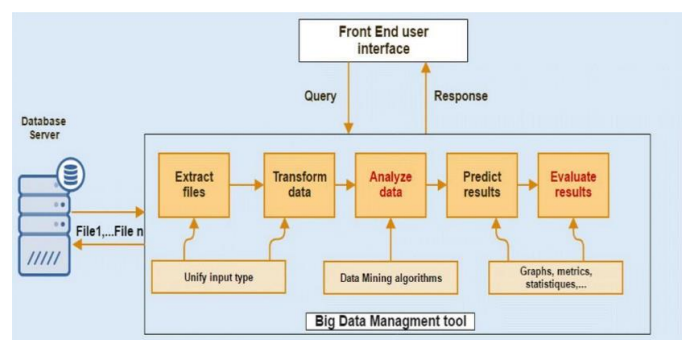

Fig:1.1- A working model

Data of my model will flow in a three-phase first phase, which is the login or register phase where use can register or login. After that next is the platform where users can select the details of issue. After that logout is there where users can safe from unauthenticated users.

5. CONCLUSIONS

In this paper, we present and validate the prototype of an automated system that ensures continuous monitoring of various health parameters and predictions of any kind diseases or disorder that prevents the patient from experiencing pain regular hospital visits. Proposed system can be set-up in hospitals or from home(Anywhere) with a large amount of data can be found and stored on an online website. Even with results can be made available to mobile phones using web application.

The system can be continuously upgraded by adding components of the simplified intelligence system doctors and patients. Data, covering medical history of multi-patient boundaries and associated outcomes, can tested using algorithm, searching for consistent patterns and systematic relationships in this diseases. For example, if the patient's health limits change accordingly pattern as of a previous patient on a website, Results can also be estimated. If the same patterns they are found repeatedly, it can be easy for doctors too medical researchers to find a solution to this problem.

Experts. Best source and quick approaches in a single mouse click. Extra curriculum like exam quizzes and any important dates also will inform with the help of the event window. Unlimited sources are there they can avail as much as they want also, they can save their time. E-learning operates in real-time is that is available 24*7 days. Learning timing is reduced. Students also avail better time management like when he is free it means there is no other work then they will start the course. At that time the mind is free so they can understand better. by the results of the highlighting toppers, they will be self-motivated and they also will work hard to hang his picture on the topper notice board. It also improves virtual communication and collaboration. Students are flexible to avail themselves of any platform and they can compete with their exams. Parents also take a report for their children and monitor classes there is no chance to bunk the classes because their parents also have IDs to watch students work.

REFERENCES

[1] Yunhong Gu, Robert LD. 2009. Grossman. Sector, public data storage and sharing system. future Computer Systems, 20 May 2009.

[2] James Broberg, Rajkumar Buyya, Tari. 2009. Meta CDN: Commitments to the delivery of high performance content. Journal of Network and Computer Applications 32 (2009), 1012--1022.

[3] Mark W. Storer Kevin G D D. E. Long Ethan L. Miller (2008). October 31, 2008, Fairfax, Virginia, USA. 2008

[4] W. K., Brotby. (2009). Information Security Management Metrics: A Sure Guide to Effective Security Monitoring and Evaluation.

[5] Lehpamer (2010), Basic Network Transmission, Microwave Transmission Networks.

[6] A. M., Rahman, & R. M. Rahman (2013), E-Negotiation for Resource Allocation in Grid Computing. International Journal of Grid and Effective Computer.

[7] J. M. A., Calero, & J. G., Aguado, J. G. (2015). Comparative analysis of cloud computing infrastructure.

[8] J., Han, J., M., Kamber, & L., Pei (2011). Data mining: concepts and strategies: concepts and strategies.

[9] August (2010). Ordinal Phase Data Analysis, Wiley Series on Possible and Statistics.

[10] K. M., Chandy & C. H., Sauer (1978). Limited Methods for Analyzing Network Models in Computer System Rows.