

Developing A Mobilized System to Check and Maintain Your Health

Katkar Ruhi¹, Namde Monali², Khodake Dipali³, Basakare Sonali⁴, Baride Samarth⁵

U.G. Students, Department of Computer Engineering, JSPMS B.I.T Engineering College, Barshi, India^{1, 2, 3, 4, 5}

ABSTRACT: This study aims in developing a computerized system to check and maintain your health by knowing the symptoms. This study has many features generally not available in normal software like suggesting doctors as per the disease, Symptom checker, give reference of mobile applications that could help us to remain fit. It has login functionality so that it would be an easier for user to register him and view all the functions on the site and access it easily and with speed. Overall this study is done to help the people of all ages to check the symptoms related to affected area and can treatment it as soon as possible. This study focuses on developing a computerized system to maintain a checkup system for people to check about their own health issues. Suggest Doctor Module includes a facility for the people to approach one of the best doctors in their field for smoking their health issues. With this computerized system there would be an ease for people to recognize the health issues.

KEYWORDS: Data Mining, Technologies Used, Proposed System, K-mean, LAMSTAR Network.

I. INTRODUCTION

This study aims mainly for the health concerns and the ones who want to be their own Doctor. It is an interactive service for users who wants to know about what health issues they are going through as per the symptoms. It is easy to access and use for searching doctors and booking the appointments. It can also be used for having knowledge about the use of mobile applications. This system has many features which are generally not available in a normal portal like facility of having the list of best doctors who has won many awards so that the person suffering from any disease can get treated from the best doctors, having knowledge of latest mobile application.

This can be done based on the doctor's knowledge and experience. This method is very easy to implement. to reduce the large number of variables and find the most probable diseases by using the K-Means algorithm. This algorithm is more suitable to cluster the more number of diseases. K-Mean is one of the unsupervised learning algorithms which are used to solve the clustering problem. The main idea is to determine the k centroids, one for each cluster. Different tests performed on the patients will served as a attributes for clustering. By using this algorithm it reduce the number of iterations, boundaries of clusters are well define without overlapping, to produce the accurate result for each and every diagnosis.

This system uses Service oriented architecture (SOA), anyone can access with internet connections and LAMSTAR Network can be used to calculate the weight, to increase the accuracy of algorithm, overall speed test and produce the better result. In this section the previous related studies are reviewed. Here the lists of symptoms are required medication for every possible disease consists of both accurate and inaccurate.

II. PROPOSED SOLUTION

The proposed study is to make a Diagnostic system which has an easy user interface which can check symptoms, which can also suggest doctors for some specific health issues so that if the symptom checker gives you a result after confirming to the doctor you can take treatment and precautions to come over it. It also helps you to know about fitness applications and the procedure to use it.

International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Website: www.ijirset.com

Vol. 6, Issue 4, April 2017

III. RELATED WORK

In this section the previous related studies are reviewed. Here the lists of symptoms are required medication for every possible disease consists of both accurate and inaccurate. This paper describes the features of such diagnosis and related symptoms for such diseases. But this site may not give total information about symptoms/diagnosis that is not relevant to the patients (i.e.) family records or some other factors. Iliad is an expert diagnostic system which is used to explain the relationships for finding the diseases. This system uses the Bayesian classification to compute the probability for possible diagnosis. Explain is a medical decision support system; it generates the ranking for list of diagnosis which is the mostly likely diseases yielding the lowest rank. Using stored information, each disease prevalence and significance, the system differentiates the common diseases and rare diseases. This system also serves as a clinician reference with a searchable database of diseases and clinical manifestations. Clinical decision support system is used to determine the diagnosis of patient records .

It contains three broad categories:

- i) Improve the patient safety.
- ii) Improve the quality of care.
- iii) Improve the efficiency in health care delivery.

Patient safety in the sense to reduce the error sand improves the medication. Second category describes to improve the clinical documentation and patient satisfaction. Third category describes to reduce the cost and list of duplications, decrease the adverse of events.

To differentiate the features of all the datasets here use novel classifier based on the bays discriminate function. Hybrid algorithm is used to extract the salient features from the huge biological datasets. Machine learning algorithm is used for the training set the main objective is to discover the relationship between the attributes which is useful to make the decision. This method avoids the several problems in medical data such as missing values, sparse information and temporal data. Machine learning algorithm is suitable for this kind of data. Two kinds of experiments:

- i) To discover association between the attributes.
- ii) Test prediction for future disorder.

The result shows that some methods predict some disorders better than others, so interesting to use all the algorithms at a time. In this paper the data mining framework propose two stages namely clustering and classification. First stage generates two clusters such as cluster-0 and cluster-1. In cluster-0 do not have any disease symptoms and cluster-2 has symptoms. This cluster group is referred to the association of class labels in original dataset. After comparing with original dataset mismatch instances are removed and estimate the accuracy, sensitivity and specificity measures for remaining instances. This will reduce the iteration and increase the accuracy.

The SOM (Self-Organizing Map) is a toolbox which is used to visualize the dataset and mapping the data from higher dimensional input space into lower dimensional space. The main goal of SOM is to cause the different parts of the network to respond similarly to certain inputs. The data request and response are in xml format. Here K-Means algorithm is proposed. There are several important properties in SOM .They are stability, compared to the total percentage of system change, isolates consumers in the development of implementation process. Reuse avoids the cost of re-implementation or modification functionality of the encapsulated services. This paper reviews the principles and several different applications of the LAMSTAR Network.

The LAMSTAR was specially developed for applications to problems involving very large memory that relates to many different categories, where some of the data is exact while other data are fuzzy and where for a given problem, some data categories may be totally missing.

Consequently, Network has been successfully applied to make decision, diagnosis and recognition problems in various fields . The knowledge base of the system contains a mathematical extract of a series of cases with known outcome inputted to the training phase. In medical diagnosis situations, the LAMSTAR system can be used as a:

- i) Teaching aid
- ii) Diagnosis aid
- iii) Tool for data analysis
- iv) Classification tools

International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Website: www.ijirset.com

Vol. 6, Issue 4, April 2017

v) Prediction tools

The LAMSTAR network provides multidimensional analysis of input variables and this system does all this without reprogramming per each diagnostic problem. Thus the LAMSTAR network can be very effective in problems where the training domain is not well defined, and where is difficult to create reliable training sets, which exactly the situation one faces in case of medical diagnosis.

IV. ARCHITECTURAL MODEL

In architectural model it contains three databases: Admin (Disease/Symptoms) database, Patient Records database and Doctor Record's database. Diseases/Symptoms database is a centralized. The patient Record database contains all the patient information. Doctor Record contains all the Doctor information.

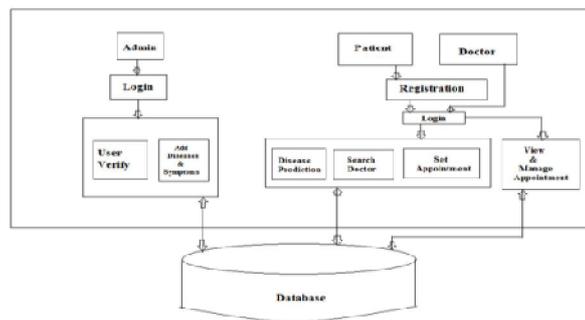


Fig.: Architectural

Model

IV. RESULT

In Login form enter Username and Password and enter into the system shown in fig.1. In the Registration form register the new patient and fill the personal information. Enter the patient name, gender email address like that fig.2. In disease prediction form enter symptoms and show related disease the system shows the appropriate doctor and then goes to the notification for doctor for visited patient. Login button is close the session fig.3. In that symptoms form show patient list and doctor profile and as well as admin add the diseases and related symptoms. Then profile part shows the patient and doctor profile fig.4



Fig.1: Login Page



Fig.2:Registration



Fig.3:Symptoms



Fig.4:Disease prediction

International Journal of Innovative Research in Science, Engineering and Technology

(An ISO 3297: 2007 Certified Organization)

Website: www.ijirset.com

Vol. 6, Issue 4, April 2017

V. CONCLUSION AND FUTURE WORK

As there was no such system available for the ones who wants to be their own doctor and who are concern for health by which the user can check their health issues they are suffering from just by selecting the body part and entering the symptoms. This study will provide the user the guidance of how to install and download the mobile application so that the person can stay fit without internet. There was a great problem in searching for the best doctors for the treatment of some common issues. This study solves it by providing the award winning doctors in their own field so that user can take appointment for his/her treatment. In future enhanced version of the system developed by including various more features and also both for doctors and patients' login and more symptoms can be added.

REFERENCES

- [1]. Michael L.Raymer, Travis E.Doom, Leslie A. "Kuhn and William F.Punch. Knowledge Discovery in Medical and Biological Datasets Using a Hybrid Bayes Classifier/Evolutionary Algorithm.IEEE Transaction on Systems, Manx and Cybernetics", Vol.33, Issue 5, October 2003.
- [2]. J.Serrano, M.Tomeckova, J.Zvarova. "Machine Learning methods for Knowledge Discovery in Medical data on Atherosclerosis, Department of Medical Informatics, Institute of Computer Science ASCR, Prague, Czech Republic".
- [3]. B.M.Patil, Ramesh C.Joshi and Durga Toshniwal "Effective framework for Prediction of Diseases outcome using medical Datasets clustering and classification Published in International Journal of computational Intelligence studies", Vol 1, Issue 3, pages 273-290, August 2010.
- [4]. Rahul Isola,Rebeck Carvalho and Amiya Kumar Tripathy.Knowledge discovery in Medical system by using Differential Diagnosis, AMSTAR and K-NN, *IEEE Transaction on Information Technology in Biomedicine*, Vol.16, No.6, November 2012.
- [5]. H.R.Warner and O.Bouhaddou. Innovation Review; Iliad A Medical Diagnostic Support Program. Top health Inf.Manage., Vol.14, No.4, 1994.
- [6]. Hubert Kordylewski and Daniel Graupe. A novel large memory neural network as an aid in medical diagnosis Applications, *IEEE Trans.Inf.Technol.Biomed.*, Vol.5, No.3, pp 202-209, Sep 2001.
- [7]. W. R. Pitt, J. Murray-Rust, and J. M. Goodfellow, "AQUARIUS2: Knowledge-based modeling of solvent sites around proteins," J. Comp. Chem., vol. 14, no. 9, pp. 1007-1018, 1993.
- [8]. A. Vedani and D. W. Huhta, "An algorithm for the systematic solvation of proteins based on the directionality of hydrogen bonds," J. Am. Chem. Soc., vol. 113, pp. 5860-5862, 1991.