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FINDING DISEASES USING SYMPTOMS

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ABSTRACT:

In our proposed system is identifying disease based on symptoms. This system will allow users to get instant guidance on their health issues through an intelligent health care android app. in this system we will cover all disease. The system is fed with various symptoms and the disease associated with those symptoms. The system allows user to enter their symptoms. It then processes user's symptoms to check for various diseases that could be associated with it. Notifications are automatically generated and send to doctors and admin of system when patient view diseases and associated symptoms. Here we use some intelligent algorithms to guess the most accurate diseases that could be associated with patient's symptoms. In doctor module when doctor login to the system doctor can view his patient details and also view the notifications generated by system. This system will provide proper guidance when the user specifies the symptoms of his illness. System will also suggest the doctors for proper treatment and patient can online take appointment with the doctor. Additionally for general disease the system will provide Ranking for General Physician, nearer to the user area.

KEYWORDS: E-health, Symptoms analysis, Minor Disease Diagnosis and Treatment

1. INTRODUCTION:

It would be hard to exaggerate the wallop of disease on history. Long ago the origin of human existence on the planet, diseases has fatigued a vital role in the events of every era.

A disease is a predicament that impairs the proper functioning of the body or of one of its part. Every living thing, both plants and animals, can yield to disease. People, for in case, are often infected by bacteria, but bacteria, in turn, can be infected by viruses. Hundreds of unlike diseases exist. Each has its own finical set of symptoms and signs, clues that enable a physician to diagnose the problem. A symptom is somewhat a patient can detect, such as fever, bleeding or pain. A sign is something a doctor can notice, such as a swollen blood vessel or an enlarged internal body organ. Every disease has a induce, although the causes of some remain to be discovered. Based on years of practice doctors can find diseases using symptoms. This system is based on knowledge acquired by doctors through years of practice.

We use the internet every day for enough of things, such as checking our Facebook, email and homework assignments. We apparently use the internet for things we don't even notice. One important use is checking health related websites, like Googling our symptoms. However, we need to be using websites that are trustworthy and secure. The medical world and healthcare system have been greatly influenced by technology's development. While technology has contributed to many improvements within healthcare, it has also presented several issues. Many of these problems relate to medical records and the internet's role within healthcare. One striking concern is how doctors us Google to gain information about their patients. While this relates to privacy, it is mostly correlated with the rise of the internet and Google. Another important problem in modern medicine is privacy. Patients may be using websites that hold their medical records, and are unaware of the privacy policies or tendencies of the sites. Many consumers are naïve about internet privacy in general, which contributes to their lack of knowledge within these healthcare websites. Though technology has contributed crucial improvements to healthcare, there are still important issues that must be addressed. Because of these issues this system helps patients to safely use the internet for their health.

This system applies algorithm and telecommunication techniques for health diagnosis. There are some patients who compel uninterrupted check-up and might want doctor aid immediately. This system was principally used for patient data analysis and disease diagnosis at several levels. This system has been designed to serve the patient and the doctors for check-up. The system is first taught with different symptoms and the disease associated with each system. User provides the apprehension of symptoms he/she is dealing with. The machine processes these symptoms to search for several diseases associated with it and renders the results. With promotion of technology more and more smart systems are being designed with better data mining technologies to give the most precise results that could be associated with the disease. If the system after peculiar research is not able to provide the exact results it promulgates it to the patient the type of disease

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it finds that the user is associated with. If the symptoms do not precisely match any disease it exhibits the result the user symptoms might be kindred with. The system has information about the doctor's phone number, address along with feedback and administrator control panel for system processes. Health careis a data rich field. With increase in research more and more data is furnished which would finally rise the need of data mining in this field. Inclination for data mining application in healthcare today is great, because healthcare sector is rich with information, and data mining is becoming a requisite. Healthcare organizations grows and gathers large volumes of information on daily basis. Use of information technologies allows automatization of processes for descent of data that help to get engaging knowledge and regularities, which means the evacuation of manual tasks and easier riddance of data directly from electronic records, delivering onto secure electronic system of medical records which will save lives and reduce the cost of the healthcare services, as well and early discovery of contagious diseases with the overture collection of data. Retrieval of information with the help of computers can help the quality of decision making and avoiding human errors. When there is a large volume of data that needs to be classified, decision making by people is usually poor. Data mining pictures the process of analyzing raw data with the help of computer and extraction of their meaning. It is frequently defined as discovering previously unknown and potentially useful information from large volume (unstructured) data

2. RELATED WORK:

Vembandasamy et al. [1] carry out a work, to name heart disease by using Naive Bayes algorithm. Bayes theorem is used in Naive Bayes. Therefore, Naive Bayes have almighty independence assumption. The employed data-set are received from one of the leading diabetic research institute in Chennai. Data set comprise of 500 patients. Weka is used as a tool and executes classification by using 70% of Percentage Split. Naive Bayes offers 86.419% of accuracy.

Parthiban and Srivatsa [2] put their deeds for diagnosis of heart disease in diabetic patients by consuming the regularities of machine learning. Data set of 500 patients is utilized that are gathered from Research Institute of Chennai. Patients that have the disease are 142 and disease is lacking in 358 patients. By using Naive Bayes Algorithm 74% of closeness is procured.

Tan et al. [3] projected hybrid proficiency in which two machine-learning algorithms named Genetic Algorithm (G.A) and Support Vector Machine (SVM) are coupled effectively by using wrapper approach. LIBSVM and WEKA data mining tool are used in this analysis. Five data sets (Iris, Diabetes disease, disease of breast Cancer, Heart and Hepatitis disease) are piked up from UC Irvine machine learning repository for this experiment. After using GA and SVM hybrid approach, 84.07% accuracy is attained for heart disease. For data set of diabetes 78.26% accuracy is achieved. Accuracy for Breast cancer is 76.20%. Correctness of 86.12% is resultant for hepatitis disease.

Iyer et al. [4] has accomplished a work to predict diabetes disease by using decision tree and Naive Bayes. Diseases occur when production of insulin is insufficient or there is improper use of insulin. Data set used in this work is Pima Indian diabetes data set. Various tests were performed using WEKA data mining tool.

Sarwar and Sharma [5] have suggested the work on Naive Bayes to predict diabetes Type-2. Diabetes disease has 3 types. First type is Type-1 diabetes, Type-2 diabetes is the second type and third type is gestational diabetes. Type-2 diabetes comes from the growth of Insulin resistance. Data set consists of 415 cases and for purpose of variety; data are gathered from dissimilar sectors of society in India. MATLAB with SQL server is used for development of model. 95% correct prediction is achieved by Naive Bayes.

In order to embrace the views that the EHR system has, the potential benefits of having an HER system are: Health information recording and clinical data repositories immediate access to patient diagnoses, allergies, and lab test results that enable better and time-efficient medical decisions; Medication management—rapid access to information regarding potential adverse drug reactions, immunizations, supplies, etc; World need better, faster, and more reliable access to information. In the medical domain, the richest and most used source of information is Medline database of extensive life science published articles. All research discoveries come and enter the repository at high rate, making the process of identifying and disseminating reliable information a very difficult task. one task is automatically identifying sentences published in [1] medical abstracts (Medline) as containing or not information about diseases and Treatments and automatically identifying semantic relations that exist between diseases and treatments. Heart disease is the leading cause of death all over the world. They have identifies gaps in the research on heart disease diagnosis and treatment and proposes a model to systematically close those gaps to discover if applying data mining techniques to heart disease treatment data can provide as reliable performances that achieved in diagnosing heart disease[14]. Various learning algorithms have been used for the statistical learning

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approach with kernel methods being the popular ones applied to Medline abstracts (Li et al.[13]).There are three major approaches used in extract in relations between entities: co-occurrences analysis, rule based approaches, and statistical methods. The co-occurrences methods are mostly based only on lexical knowledge and words in context, and even though they tend to obtain good levels of recall, their precision is low. Good representative examples of work on Medline abstracts include Jenssen et al. [7] and Stapley and Benoit [8]. Syntactic rule-based relation extraction systems are complex systems based on additional tools used to assign part of speech tags or to extract syntactic parse trees.

3. METHODOLOGY:

Proposed system consists of the android APP, admin panel, doctor panel. The tasks that are available in the proposed system:

1. First task is automatically identifying disease based on symptoms
2. The second task is focused on showing diseases and respective doctors.

Table 1output based on symptoms

1	Chest Pain	Heart Attack
2	Head Ache	Brain Tumor
3	Fever, Extreme Tiredness (Fatigue), Weight Loss.	Cancer

ANDROID APP: In this APP, develop a user pages using Graphical User Interface which will be an interface to connect User to this system's database. Login screen where user can enter his/her user name, password. User name, password will check in database, if that will be a valid username and password then he/she can access the app functionality. Symptoms screen where user can select symptoms. Diseases screen where user can see diseases based on symptoms selected in symptoms screen. Doctor screen where user can view list of doctors associated with disease.

ADMIN PANEL: In this panel, develop a user pages using Graphical User Interface which will be a interface to connect admin to this system's database. Doctors screen where admin can add doctor details. Symptoms screen admin can add symptoms. Diseases screen where admin can add diseases. Disease's symptoms screen where admin can add symptoms related to diseases. Notifications screen where admin can view search results given by our systems based on user inputs. Feedback screen where admin can view feedback given by user

DOCTOR PANEL: In this panel, develop a user pages using Graphical User Interface which will be an interface to connect doctors to this system's database. Notifications screen where doctors can view search results given by our systems based on user inputs. Patients screen where doctors can view registered users. Feedback screen where doctors can view feedback given by user The tasks that are available in the proposed system:1. First task is automatically identifying sentences published in medical abstracts.2. The second task is focused on three semantic

RELATIONS: Cure, Prevent, and Side effect. Client Interface: In this Module, develop a user page using Graphical User Interface which will be a media to connect User and Media Database and login screen where user can input his/her user name, password and password will check in database, if that will be a valid username and password then he/she can access the database. Sentence from database. Classification: After extracting Sentence from the database we have to classify the relation for the Cure, Prevent and Side

RESULT AND DISCUSSION:

For example user can select the symptoms like head ache, stomach pain. Table 1 shows the output

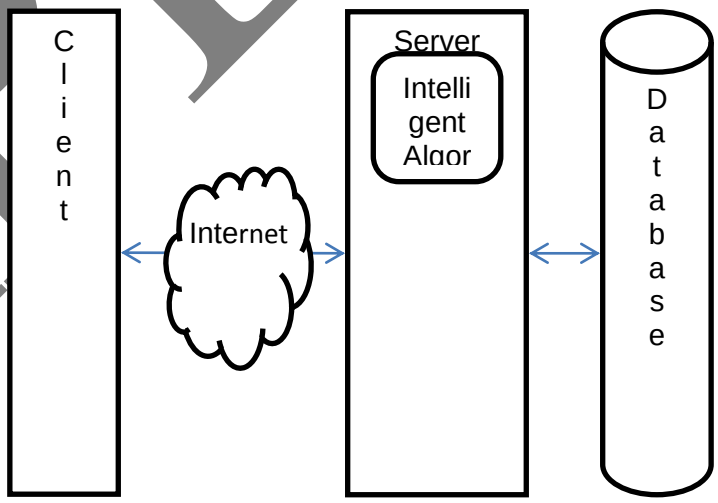

Figure 1 disease find system

INDENTIFY THE DISEASE: In this module user is going to give the symptoms as an input and get the desired disease name. In this it will search as semantic word and give the output to the user. Sentence Splitting: n this stage user has to enter the symptom in a short text. Then taking out the human errors from the sentence typed by the user like comma, dot with space and without space. Semantic Extraction: After removing the Human errors from the sentence we have to get the semantic words it means if user typed some wrong words then it will correct it with semantic words that is maintained in the database. Removing unwanted words: In this module we are concentrating on the unwanted words from the

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sentence typed by the user. It will be very tough task to implement with the sentence that talked about disease treatment relation. Disease identification: After eliminating words were going to find the correct disease with High Priority and Low Priority. Sentence Extraction: In this module user to provide input as a disease. That means relevant to our article and extract the informative

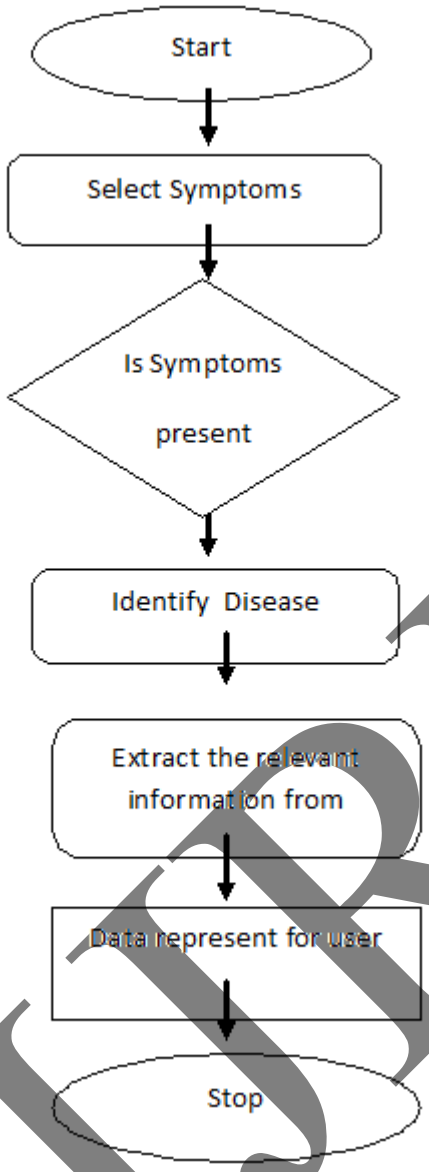

Figure 2 Flow chart for disease finds system

4. CONCLUSION:

For organizations, it presents one of the key things that help create good business strategy. Healthcare institutions that use data mining applications have the possibility to predict future requests, needs, desires, and conditions of the patients and to make adequate and optimal decisions about their treatments. With the future development of information communication technologies, data mining will achieve its full potential in the discovery of knowledge hidden in the medical data. Using this system we can find right doctors at right place and at right time. This system helps to increase doctors and patients interaction .Save time and money. This system helps doctors to get more patients.

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