

Smart health Application for Health-care System using Data Mining algorithm

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Abstract: - *In proposed system we are developing the Android App for healthcare system which will help to healthcare system .The purpose of this system is, using android app Doctor can send patients medical information to the warehouse and after applying data mining algorithm it can generate reports which is useful for healthcare system.*

Keywords

ETL(Extraction, Transaction, Load), analytical report, android.

I. INTRODUCTION

Now days healthcare industry is very rapidly growing industry so new applications based on various platforms are developed. And this Smart health Application using data mining algorithm is used in various medical purpose. Proposed system generates then reports which helps to increase business profit using business intelligence. Simply this is one application that can help various medical users to increase their business profit smartly.

II. LITERATURE SURVEY

Shola Adeyemi, Eren Demir, Thierry Chausalet [1] introduce a random effects continuation-ratio logit model, suitable for detecting stage wise transitions, to patient pathways modelling. Second, we aim at advancing our knowledge with regard to the application of modelling techniques to patient pathways. We study individual clinical pathways of chronic obstructive pulmonary disease (COPD) patients, a source of concern for major stakeholders. Data on COPD patients were extracted from the national English Hospital Episodes Statistics dataset. Individual patient pathways from initial admission through to more than four readmissions are captured.

Shoohira Aftab, Hammad Afzal, and Amna Khalid [2] proposed Service Oriented Architecture and Cloud computing together has enabled users to access services over the Internet at a low cost. Cloud computing model provides a layer which is responsible for providing data to the other layers and services i.e., Data as a service (DaaS) layer. The issue of providing an integrated view of data can be handled using Semantic data; the data stored in a way that is understandable by machines and integratable without human intervention.

Kamal Ali Albashiri, Frans Coenen introduce Agent-Enriched Data Mining (AEDM), also known as multiagent data mining, seeks to harness the general advantageous of MAS in the application domain of Data Mining (DM). MAS technology has much to offer DM, particularly in the context of various forms of distributed and cooperative DM. Distributed (and parallel) DM is directed at reducing the time complexity of computation associated with the increasing sophistication, size and availability of the data sets we wish to mine. Cooperative DM encompasses ensemble mechanisms and techniques such as bagging and boosting. MAS have a clear role in both these areas.

In this propose system generate the medical report as result that helps to any users who are related to the medical field. Now days each one are using various technologies for developing their business. And proposed system can provide the business intelligence.

Emerging information technologies for enhance healthcare system – It's our base paper healthcare covers all information related to patient disease for performing analysis using data mining.

A multi agent system to support evidence based medicine and clinical decision making via data sharing and data privacy –In this paper multi agent approach for data mining consisting multiple collaborating agents, a multi agent system perform task on behalf of users MAS has been applied to data mining.

Big data for supply chain management in the service and manufacturing sectors: challenges, opportunities and future perspective –data from service and Manufacturing sharply and lifts up a growing enthusiasm for the notion of big data.

III. SYSTEM ARCHITECTURE

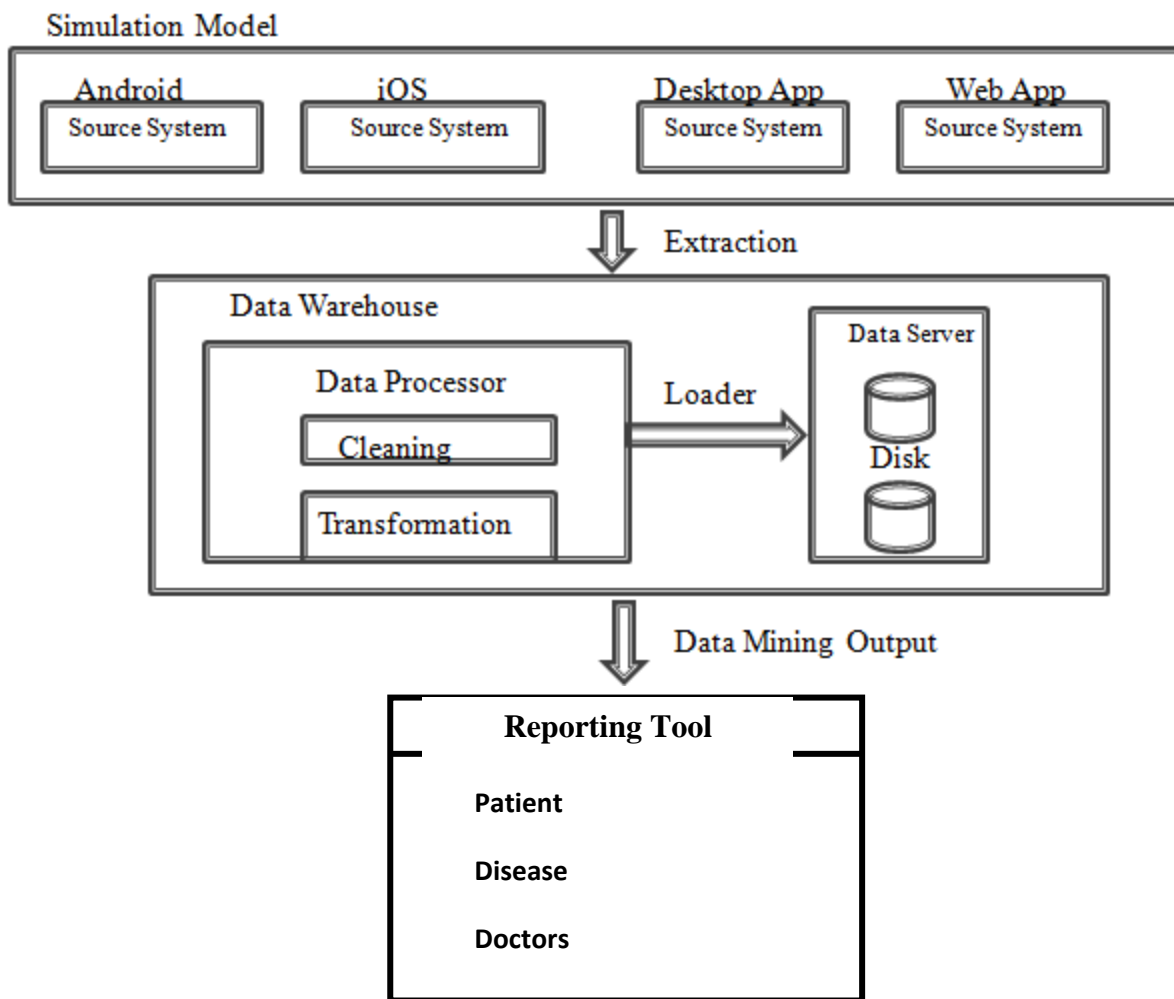


Fig. System Architecture

Each time new patient visits to doctor, doctor will register the patient details through android device. The system will not suggest the doctor of the disease but will just store the information provided by the doctor. Users which are related to the medical stream which will sends the medical information to the warehouse through the android application. Using web service data will be stored on to the warehouse and later only required data like patient id, and disease related information can using ETL tool extract data from data warehouse.

After fetching an essential information from data warehouse applying data mining algorithm we can perform data analysis further generate the medical

reports that helps to decision making for different medical users.

The report which gives the area wise disease count and medicine count will be useful for any chemist in this particular area and analyzing this reports the chemist will enhanced their business intelligently

Our system consists of following modules:

1. pateint registration
2. data warehouse
3. data mining
4. report generation

1. Patient Registration

Doctors will register their personal and medical information through the android app and then send this data to warehouse.

2. Data warehouse

the data send by patient registration module is stored on data warehouse for processing purpose using web service data will be send from application to data warehouse.

3. Data Mining

In this module retrieve the essential data using ETL tool(Extract, Transform, Load). this data will be used for report generation . processing is done by applying data mining algorithm for disease analysis. algorithms are like clustering and regression algorithm are use our system..

4. Report Generation.

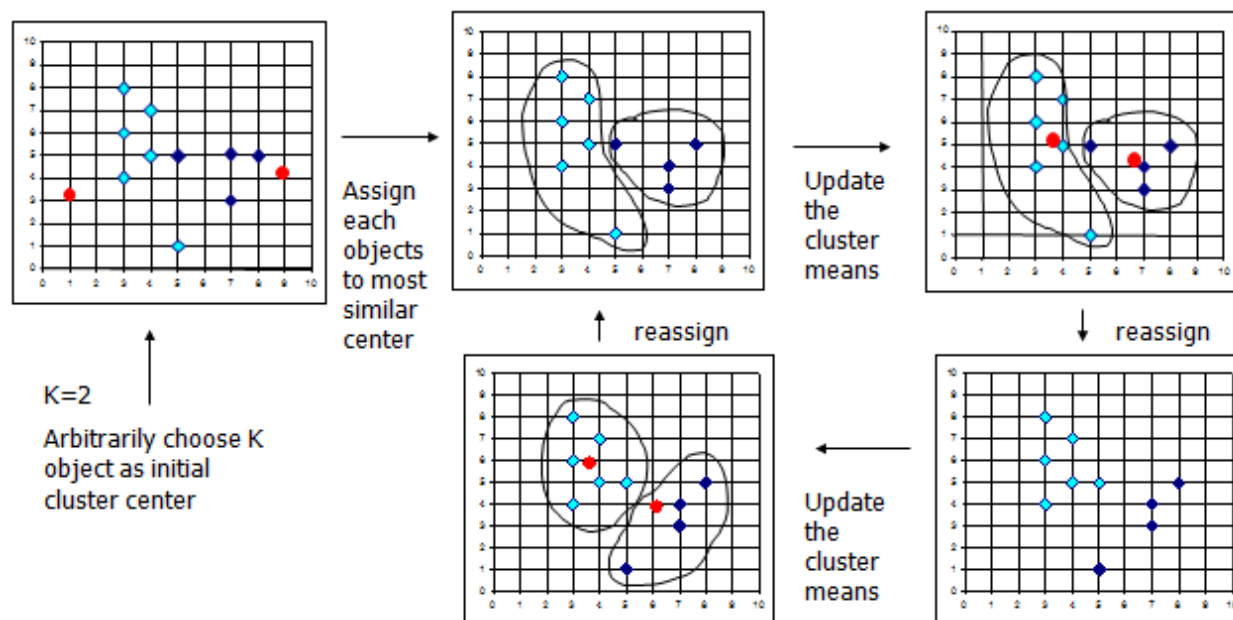
In this final module result in the form of medical reports are generated according to disease analysis in a particular area. area wise disease count, history of disease in this specific area, area wise medicine count will be get through the medical reports .so it will helps to all patients and medical users .also medical users grown up their business intelligently.

Methodologies and algorithms

1. Clustering

Clustering is set of similar type of object ,in this application object is in the form of various type of diseases, clustering used for identifying the disease count or frequency in specific area and this can be used for further report generation that helps to users profit in their own business.

The K-Means Clustering Method



2. Regression

Regression is the algorithm which is used for predictive analysis. The simplest form of the equation with one dependent and one independent variable is defined by the formula $y = c + b * x$, where $y =$ estimated dependent score, $c =$ constant, $b =$ regression coefficients, and $x =$ independent

variable. in this application regression technique used for predicting the future results on the basis of previous generated reports.

IV. CONCLUSION

In our system we are developing the Android App for healthcare system which will help to automate all the manual work. The purpose of this system is, is to enhanced business of medical related fields and patients need satisfaction will be get through this application report generation.getting medicine and disease count availability of medicines are more..

V. REFERENCES

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