



Research Paper

Healthify Management System

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ABSTRACT— The Healthcare industry collects a very huge amounts of healthcare data which, unfortunately, are not mined to discover hidden information for effective decision making. Discovery of hidden patterns and relationships goes unexploited. Advanced data mining techniques help to rectify this situation. This research has developed a prototype Healthify Management System using data mining techniques, namely, Decision Trees, Naïve Bayes and Neural Network. Results show that every technique has its distinctive strength in realizing the objectives of the outlined mining goals. HDPS can answer complex queries which traditional decision support systems cannot. Using medical profiles such as age, sex, blood pressure and blood sugar it can predict the likelihood of patients getting a disease. It enables significant knowledge, e.g. patterns, relationships between medical factors related to disease, to be established. IHDPS is Web-based, easy, scalable, reliable and expandable. it's enforced on the python platform.

Keywords— Healthify Management, Data Mining, Healthcare, Machine Learning.

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I. INTRODUCTION

Healthify Management victimisation Machine Learning may be a system that predicts the sickness supported the knowledge provided by the user. It additionally predicts the sickness of the patient or the user supported info{the knowledge|the data} or the symptoms he/she enter into the system and provides the correct results supported that information. If the patient isn't a lot of serious and also the user simply needs to grasp the sort of sickness, he/she has been through. it's a system that provides the user the ideas and tricks to take care of the health system of the user and it provides the way to search out out the sickness victimisation this prediction. currently a day's health trade plays major role in solidifying the diseases of the patients thus this is often additionally some quite facilitate for the health trade to inform the user and additionally it's helpful for the user in he/she does not need to travel to the hospital or the other clinics, thus simply by coming into the symptoms and every one alternative helpful data the user will get to grasp the sickness he/she is stricken by and also the health trade can even get have the benefit of this method by simply asking the symptoms from the user and coming into within the system and in merely|in precisely|in barely} few seconds they'll tell exact and up to some extent the correct diseases. This DPUML is antecedently done by several alternative organizations however our intention is to create it completely different and helpful for the users UN agency area unit victimisation this method. This Healthify Management victimisation Machine Learning is totally finished the assistance of Machine Learning and Python programing language with Tkinter Interface for it and additionally victimisation the dataset that offered antecedently by the hospitals victimisation that we'll predict the sickness. currently a day's doctors area unit adopting several scientific technologies and methodology for each identification and designation not solely common sickness, however additionally several fatal diseases. The made treatment is

often attributed by right and correct identification. Doctors could generally fail to require correct selections whereas designation the sickness of a patient, thus Healthify Management systems

II. RELATED WORK

FROM [10] TITLED “ACCEPTANCE MODEL OF ELECTRONIC ANAMNESIS” DISCUSSES REGARDING ACCEPTANCE PROBLEMS WITH ELECTRONIC MEDICAL RECORD SYSTEM (EMR), SIGNIFICANTLY IN MALAYSIA. A CLOSE SUMMARY OF EMR AND ITS EDGES SQUARE MEASURE FIRST OFF MENTIONED. VARIETY OF ACCEPTANCE MODELS SQUARE MEASURE SCRUTINIZED. THEN FACTORS MOVING EMR ACCEPTANCE SQUARE MEASURE HINTS. FINALLY, BEFORE PROPOSING ASSOCIATE DEGREE EMR ACCEPTANCE MODEL, ASSOCIATE DEGREE INSTRUMENT FASHIONED BY ADAPTING AND SO FINDING ITS FACTORS LOADING IS GIVEN.

From [12] titled “Application of information Mining Techniques to aid information, A high-level introduction to data processing because it relates to police investigation of aid information is given. data processing is compared with ancient statistics, some blessings of machine-controlled information systems square measure known, and a few data processing ways and algorithms square measure represented. A concrete example illustrates steps concerned within the methoding} process, and 3 undefeated data processing applications within the aid square measure are represented.

From [17] titled “The Next Generation Clinical call Support: Linking proof to Best observe, Growing proof indicates that the mixing of clinical call support (CDS) into the computer-based patient record (CPR) will decrease medical errors, enhance patient safety, decrease unwanted observe variation, and improve patient outcomes. 2 case studies square measure given of advanced CDS systems that transcend basic integration with the cardiopulmonary resuscitation to really support practitioner deciding.

III. PROPOSED METHOD

- This practice leads to unwanted biases, errors and excessive medical costs which affects the quality of service provided to patients.
- Thus we proposed that integration of clinical decision support with computer-based patient records could reduce medical errors, enhance patient safety, decrease unwanted practice variation, and improve patient outcome.
- This suggestion is promising as data modeling and analysis tools, e.g., data mining, have the potential to generate a knowledge-rich environment which can help to significantly improve the quality of clinical decisions.
- The main objective of this research is to develop a prototype Intelligent Healthify Management System (IHDFS) using three data mining modeling techniques, namely, Decision Trees, Naïve Bayes and Neural Network.
- So its providing effective treatments, it also helps to reduce treatment costs. To enhance visualization and ease of interpretation

PROJECT MODULE

- **Dataset Upload Module:**
This module we have developed to upload datasets for prediction of disease, currently we are using Kaggle dataset.
- **Prediction Module :**
In this module, we have developed form for taking input from users where user can put their all data’s after that we perform prediction that user has disease or not
This is the main module of the project, where we have implemented Logistics algorithm for performing data training and predictions on users input. We have divided dataset into 80-20 ratio, where 80% we have used for data training and 20% for testing.
- **File management:**
This module we have developed to manage all of the dataset files uploaded by admin user, he can view dataset, set data, sort it and delete file also
- **Data Analysis :**
This is data analysis module and we normally analyzing our data uploaded by admin through csv files.
- **Login Module:**
Used for managing the login details

IV. METHODOLOGY

IHDPS uses the CRISP-DM methodology to create the mining models. It consists of six major phases: business understanding, knowledge understanding, knowledge preparation, modeling, evaluation, and preparation. Business understanding part focuses on understanding the objectives and necessities from a business perspective, changing this data into an information mining downside definition, and coming up with a preliminary arrange to bring home the bacon the objectives. knowledge understanding part uses the raw the information and issue to grasp the information, determine its quality, gain preliminary insights, and observe fascinating subsets to make hypotheses for hidden data. knowledge preparation part constructs the ultimate dataset which will be fed into the modeling tools. This includes table, record, and attribute choice further as knowledge cleansing and transformation. The modeling part selects and applies varied techniques, and calibrates their parameters to optimum values. The analysis part evaluates the model to make sure that it achieves the business objectives. The preparation part specifies the tasks that area unit required to use the models [3]. data processing Extension (DMX), a SQL-style source language for data processing, is employed for building and accessing the models contents. Tabular and graphical visualizations area unit incorporated to reinforce analysis and interpretation of results.

DATA SOURCE

A total of 909 records with fifteen medical attributes (factors) were obtained from the Cleveland illness information [1]. Figure one lists the attributes. The records were split equally into 2 datasets: coaching dataset (455 records) and testing dataset (454 records). To avoid bias, the records for every set were chosen arbitrarily.

For the sake of consistency, solely categorical attributes were used for all the 3 models. All the non-categorical medical attributes were remodeled to categorical information. The attribute designation was known because the sure attribute with worth one for patients with illness and worth zero for patients with no illness.

The attribute PatientID was used because the key; the remainder ar input attributes. it's assumed that issues like missing information, inconsistent information, and duplicate information have all been resolved.

IMPLEMENTATION

Model read Controller or MVC because it is popularly referred to as, could be a software system style pattern for developing net applications. A Model read Controller pattern is created from the subsequent 3 parts:

Model - very cheap level of the pattern that is chargeable for maintaining knowledge.

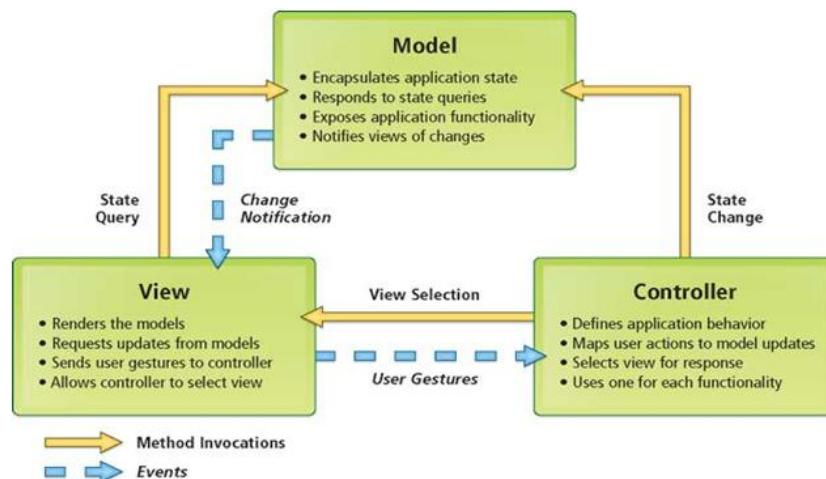
View - this is often chargeable for displaying all or a little of the information to the user.

Controller - software system Code that controls the interactions between the Model and look at.

MVC is fashionable because it isolates the appliance logic from the programme layer and supports separation of considerations. Here the Controller receives all requests for the appliance so works with the Model to arrange any knowledge required by the read. The read then uses the information ready by the Controller to come up with a final respectable response.

The MVC abstraction can be graphically represented as follows.

DATA FLOW DIAGRAMS



V. RESULT ANALYSIS AND DISCUSSION

TOOLS USED

SOFTWARE REQUIREMENTS

Name of component	Specification
Operating System	Windows 98, Windows XP, Windows7, Linux
Language	Python 3.7
Database	MySQL Server
Browser	Any of Mozilla, Opera, Chrome etc
Web Server	Django
Software Development Kit	Django 2
Scripting Language Enable	PythonScript
Database JDBC Driver	MySQL Connector

HARDWARE REQUIREMENTS

Name of component	Specification
Processor	Pentium III 630MHz
RAM	128 MB
Hard disk	20 GB
Monitor	15" color monitor
Keyboard	122 keys

LANGUAGE

Python is an interpreted, high-level and general-purpose programming language. Created by Guido van Rossum and 1st discharged in 1991, Python's style philosophy emphasizes code readability with its notable use of serious whitespace. Its language constructs and object-oriented approach aim to assist programmers write clear, logical code for tiny and large-scale comes.

Django Introduction

Django may be a high-level Python internet framework that encourages fast development and clean, pragmatic style. designed by old developers, it takes care of a lot of of the effort of internet development, thus you'll be able to target writing your app with no need to reinvent the wheel. Its free and open supply. Django may be a Python-based free and ASCII text file internet framework that follows the model-view-controller (MVC) discipline pattern. it's maintained by the Django code Foundation (DSF), Associate in Nursing yank freelance organization established as a 501(c)(3) non-profit.

Django's primary goal is to ease the creation of advanced, database-driven websites. The framework emphasizes reusability and "pluggability" of parts, less code, low coupling, fast development, and also the principle of do not repeat yourself. Python is employed throughout, even for settings files and information models. Django conjointly provides Associate in Nursing facultative body produce, read, update and delete interface that's generated dynamically through self-examination and designed via admin models.

VI. CONCLUSION

This project Healthify Management exploitation machine learning is incredibly abundant helpful in everyone's day to day life and it's principally additional necessary for the aid sector, as a result of they're the one that daily uses these systems to predict the diseases of the patients supported their general data and there symptoms that they're been through. currently a day's health business plays major role in hardening the diseases of the patients therefore this can be additionally some quite facilitate for the health business to inform the user and additionally it's helpful for the user just in case he/she does not need to travel to the hospital or the other clinics, therefore simply by getting into the symptoms and every one alternative helpful data the user will get to understand the sickness he/she is littered with and therefore the health business also can get enjoy this method by simply asking the symptoms from the user and getting into within the system and in exactly few seconds they'll tell the precise and up to some extent the correct i diseases. If health business adopts this project then the work of the doctors are often reduced and that they will simply predict the sickness of the patient. The Healthify Management is to produce prediction for the assorted and customarily occurring sicknesses that once uncurbed and generally neglected will turns into fatal disease and cause ton of drawback to the patient and furthermore as their members of the family. A example Healthify Management system is developed exploitation 3 data processing classification modeling techniques. The system extracts hidden information from a historical sickness info. DMX command language and functions area unit accustomed build and access the models. The models area unit trained and valid against a take a look at dataset. raise Chart and Classification Matrix

strategies area unit accustomed assess the effectiveness of the models. All 3 models area unit able to extract patterns in response to the certain state. the foremost effective model to predict patients with sickness seems to be Naïve mathematician followed by Neural Network and call Trees.

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