A Healthcare And Diagnosis System For Recommending Proper Guidelines For Diet And Exercise

Swati C. Pakhale[1], Prof. S. R. Tayde[2]
[1, 2] Dept of CSE
[1, 2] Sanmati Engineering College, Washim

Abstract- *Nowadays, health disease is expanding day by day due to life style, hereditary. Especially, heart disease has grown into more common these days .i.e. life of people is at risk. Each individual has distinct values for Blood pressure, cholesterol and pulse rate. But according to medically proven results the regular values of Blood pressure is 120/90, cholesterol is and pulse rate is 72. This paper gives the analysis about different classification techniques used for predicting the exposure level of each person based on age, gender, Blood pressure, cholesterol, pulse rate. The patient risk level is restricted using data mining classification approach such as SVM, KNN, and Decision Tree Algorithm, etc., Accuracy of the risk level is high when using also number of attributes. Classifying data is one of the most frequent tasks in Machine learning. Machine Learning provides one of the main features for separating knowledge from large databases from activity operational databases. Machine Learning in Medical Health Care is appear field of very high importance for contribute prognosis and a deeper understanding of medical data. Most machine learning techniques depend on a set of features that define the behavior of the learning algorithm and directly or indirectly affect the performance as well as the complexity of resulting design.*

Keywords- Decision Tree, Machine Learning, Databases, Prognosis, Medical Data

I. INTRODUCTION

This Heart disease and low blood pressure are the enormous cause of death these days. Pressure level, sterol, pulse are the key reason for the guts malady. Some non-modifiable aspect also is there like smoking, drinking conjointly reason for heart situation. If heart didn't work accordingly it state advise that, it'll have an implement on other build half conjointly. Some endanger factors are High vital sign, sterol, Age, Poor diet, Smoking. Once blood vessels are overstretched, the chance level of the blood vessels is enhancing. This results in the vital sign. Vital sign is often deliberate in terms of heartbeat and pulsation. Pulse demonstrate the pressure within the arteries once the guts muscle consume and pulsation indicates the pressure within the arteries earlier the guts muscle is in resting.

II. HISTORY OF TUTORING SYSTEM

Sha Avison expresses a methodology as "a set of procedures, techniques, tools and documentation aids which will help organization developers in their achievement to crop a new information system".

Before the initiation of software development methodologies, systems were often poorly construct and inappropriate to the user's needs as greater insistence was always placed on programming. Without any clear construction it was also ambitious to estimate project fulfillment dates and software development projects almost consistently overran. Although still an issue today, it is less of a dispute than before the introduction of methodologies.

Methodologies contribute a more systematic contact to software development, certainly defining tasks and giving greater authority control, to escape cost and schedule overruns. It is therefore necessary that my project follow a methodology and this section will survey a number of methodologies available.

Waterfall model break down the development into six various stages that cover every process required to develop a computer system. This implement management to take greater control over the process at each stage and also permit management to make more authentic predictions of covet schedules, thus preventing project delays and cost overruns.

The six stages of development include:

1. Feasibility study
2. Systems analysis
3. System design
4. Implementation

5. Test
6. Review and maintenance.

Each stage is precisely defined with a set of sub tasks and processes assure that all aspects of development are covered. A stage must therefore be concluded fully before moving onto the next stage. i.e. no two stages can run asynchronously.

The advantage of using this model is that the user is certainly involved in the development. The user is associated at both the Systems analysis and Implementation stages. At the Systems Investigation stage the user is involved to inaugurate the user requirements and needs of the system and again at the Implementation stage for user testing and penetrate data. As previously highlighted user involvement is demanding to the success of the system.

The difficulty of this development model includes changes in user requirements. The six specific stages make the model adamant to incorporate a change in user requirements throughout the improvement process. This may then mean that by the end of the development the structure no longer has any real use to the user.

A variation to this model that includes the opportunity to rebound to the previous stage in order to review the work carried out can overcome this complication. This is known as a Waterfall model with iterative evaluation. This model grants the developer to revisit the design stage or requirements stage and consolidate any user requirement changes that may occur during development. It can however make it more problematic to predict the project schedule and there will be no clear end to each stage.

III. TECHNOLOGIES USED

Research on data mining has led to the grouping of several data mining algorithms. These algorithms can be precisely used on a dataset for creating some image or to draw vital consequence and inferences from that dataset. Some prominent data mining algorithms are Decision tree, Naïve Bayes, k-means, artificial neural network etc.

A Decision tree is a opinion support tool that uses a tree- like graph or model of decisions and their desirable consequences including chance accident result and utility. It is one of the ways to exhibit an algorithm. Decision trees are commonly used in action research, specifically in decision analysis to help and determine a strategy that will most likely reach the objective. It is also a prominent tool in machine learning. A Decision tree can conveniently be convert to a set of rules by mapping from the root node to the leaf nodes one by one. Finally by following these rules, devote outcome can be take place. It is a classifier in the form of a Decision tree. It is a managed learning technique which uses information achievement and pruning for enhanced results. It is quite fast, popular and the output is efficiently interpretable.

IV. STRUCTURE OF ITS WORKING

Basically, research based on some of the new conversion as compared to earlier methodology which includes different technologies to improve the prediction of disease and provides more certainty in result. Those modifications are as follows:

1. Increasing dataset of patients to increase the accuracy
2. Symptoms and lab test entrance to be maintained for prospect purpose
3. Time to time notifications for patient health and check-up admonition
4. Linking the patient with bulk of doctor so as to find out the best result for diet and analysis
5. Scanning and automatically entry of lab test reports to diminish the time compulsory while entering manually.
6. Meditation and yoga videos to be applicable with patient login page.
7. Emergency causalities to be shaft with proper method.

V. ADVANTAGES

1. Increases Efficiency: As it scales down the human power then it definitely saves out time. Accuracy is the constitutional factor which can be accomplish through newer technology.
2. Appreciate Data Collection
3. Improve security: Now, if we have an organization that all these things are analogous then we can make the system more protected and efficient.

VI. DISADVANTAGES

1. There are security parts that are taken to protect information, but there is regularly the possibility of hackers breaking into the system and stealing the data.
2. Also, companies could exploitation the information that they are given access to. This is a common mishap that takes place within companies all the time. Just recently Google got caught using information that was purported to be private.

VII. CONCLUSION

In this project, we carried out an observation to find the predictive performance of various classifiers. We select four prominent classifiers considering their qualitative achievement for the experiment. We also choose one dataset from heart accessible at UCI machine learning repository. Naïve base classifier is the perfect in performance. In order to analyze the classification performance of four machine learning algorithms, classifiers are enforced on same data and outcome are compared on the basis of misclassification and equitable classification rate, it can be concluded that Naïve base classifier is the best as compared to Support Vector Machine, Decision Tree and K-Nearest Neighbor. After figure out the significant data generated from the computer simulations,

Moreover their performance is closely ambitious showing slight variation So, more experiments on several other datasets need to be considered to draw a more general decision on the comparative performance of the classifiers. This research makes an individual under consideration for those who will give proper time and achievement in completing the entries successfully.

REFERENCES

[1] https://pdfs.semanticscholar.org/9df1/8916940b732543c4aeaf9c4291ff9c8b17b0.pdf
[2] https://pdfs.semanticscholar.org/668c/99225fea30b6b7f9305b3eab19f71bba9de4.pdf
[3] https://pdfs.semanticscholar.org/c0dc/b61a41a7f9aeb8f5bf85eed7583ea6d2c77d.pdf
[4] International Journal of Recent Research Aspects ISSN: 2349-7688, Vol. 4, Issue 2, June 2017, pp. 94-97 © 2017 IJRRA All Rights Reserved page-96 heart disease.
[5] https://pdfs.semanticscholar.org/8f7d/c404276e2a0b507217c5a38bbe67146c9725.pdf
[6] https://www.ijresm.com/Vol.2_2019/Vol2_Iss2_February19/IJRESM_V2_I2_89.pdf
[7] http://www.ijritcc.org/download/browse/Volume_5_Issues/August_17_Volume_5_Issue_8/1503650205_25-08-2017.pdf
[8] https://acadpubl.eu/hub/2018-119-18/2/116.pdf
[9] K. Sudhakar, Dr. M. Manimekalai, "Study of Heart Disease Prediction using Data Mining", International Journal of Advanced Research in Computer Science and Software Engineering, Volume 4, Issue 1, pp.1157-60, January 2014.
[10] S. U. Amin, K. Agarwal, and R. Beg, "Genetic Neural Network Based Data Mining in Prediction of Heart Disease Using Risk Factors," ,IEEE Conference on Information and Communication Technologies (ICT 2013).