

Disease Detection And Hospital Recommendation As Per User Symptoms

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Abstract

Given the current condition of our environment, people are facing various disease. So it is better to diagnosed the symptoms and predict the disease at the starting stage of disease. But the prediction made by diagnosing the symptoms must be precise, accurate and most likely correct. As nowadays, healthcare services is working hand-in-hand with new technology. The aim is to develop the system for prediction of disease with the help of the inputed symptoms and various machine learning models for giving assistance to physicians.

I. INTRODUCTION

We get to identify the disease one is suffering from with help of the symptoms faced by that individual. Analyzing of the symptoms is one of the most important step since by analysis it we get to know the nature of the disease. [2]

Storing of data in form of medical history before exiting so to avail its benefit for later use, to access records in urgency or when in need is also possible.[5]

WEB DEVELOPMENT

Web Development helps us to make beautiful websites, it also provide flexibility to the programmer to design as per their abilities. Web development helps in increasing the efficiency of the programmer.

MACHINE LEARNING

Machine Learning is one of growing technology in which machine learns automatically for the data provided or from the past data. It uses various algorithms and techniques for model building which helps in prediction using historical data or information.[1] It consist of wide range of machine learning technique to determine which algorithm to use.

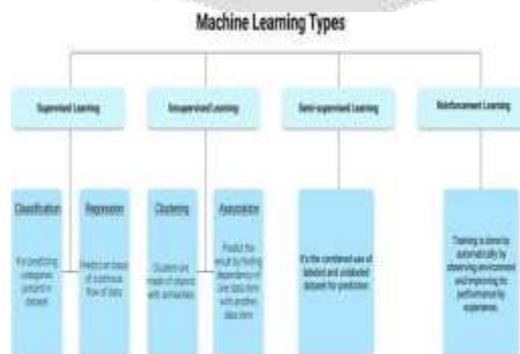


Fig.1 Machine learning Types

1] RANDOM FOREST CLASSIFIER:

Random Forest is a common and easy to use machine learning algorithm for classification of data which belongs to supervised learning. It is an ensemble learning method (i.e use of multiple learning algorithm to provide better performance in prediction) for regression and classification problems.[1] It works on the principle of building a model by merging various classifiers for gaining better accurateresults.

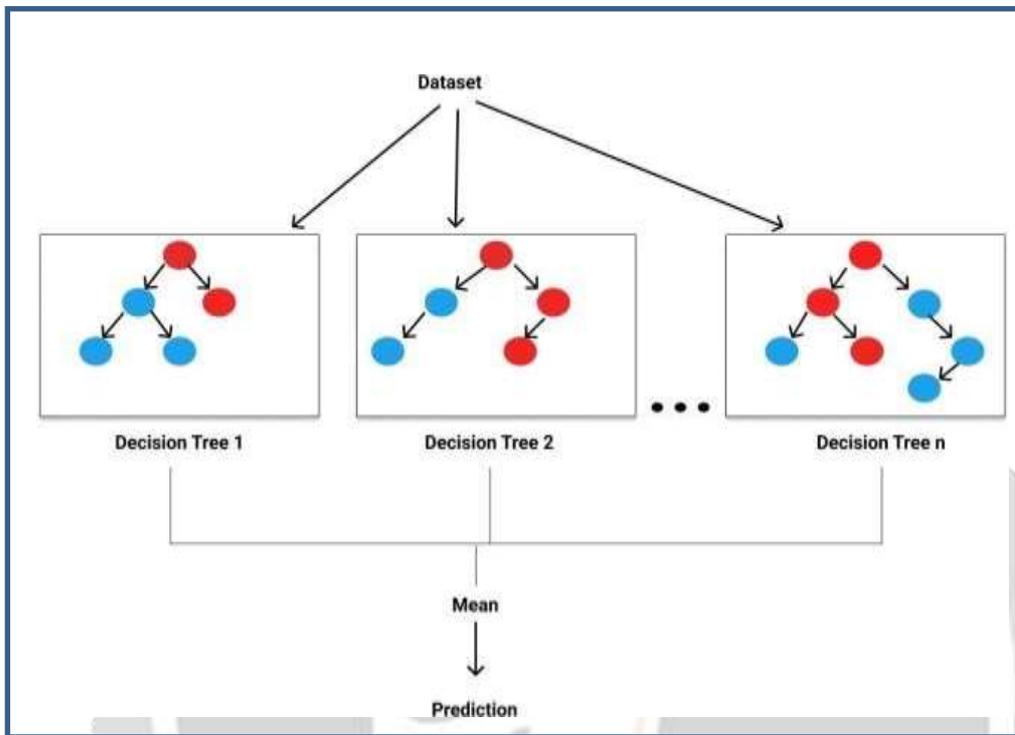


Fig 2: Random Forest Algorithm

2] DECISION TREE CLASSIFIER:

Decision tree as the name suggest, use to make decision between various solutions. Decision tree is the best technique used for supervised learning in both the classification and regression problems.[1] However, it is mostly preferred for classification problem. It includes the Decision and Leaf nodes.

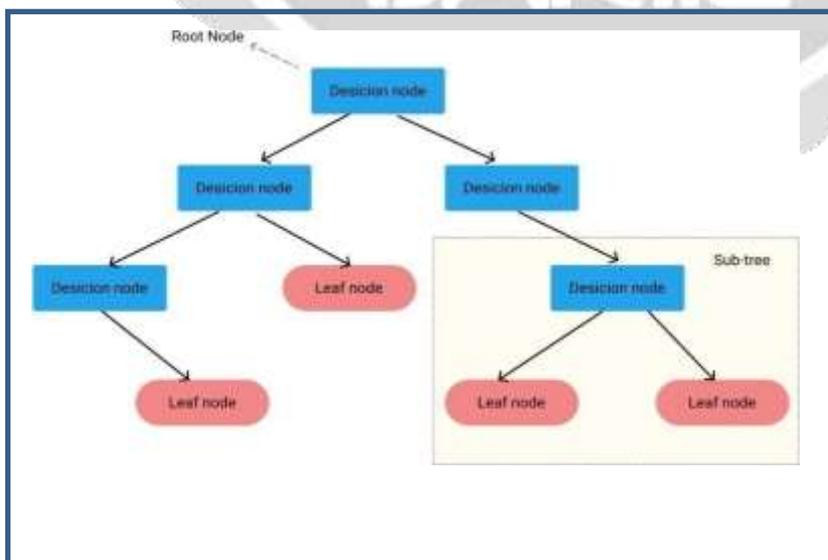


Fig 3: Random Forest Algorithm

IV. LITERATURE SURVEY

ML is a efficient technology which takes in consideration a collection of data and after analysis gives us a final result. It can be useful in disease detection of a user as per the symptoms data inputed.

The objective for developing classifier system with the help of machine learning algorithms is to immensely help to solve the health related issues.

From the development of machine learning along with its applications in medical sector, it can be shown that systems and methodologies have helped us for getting accurate result.

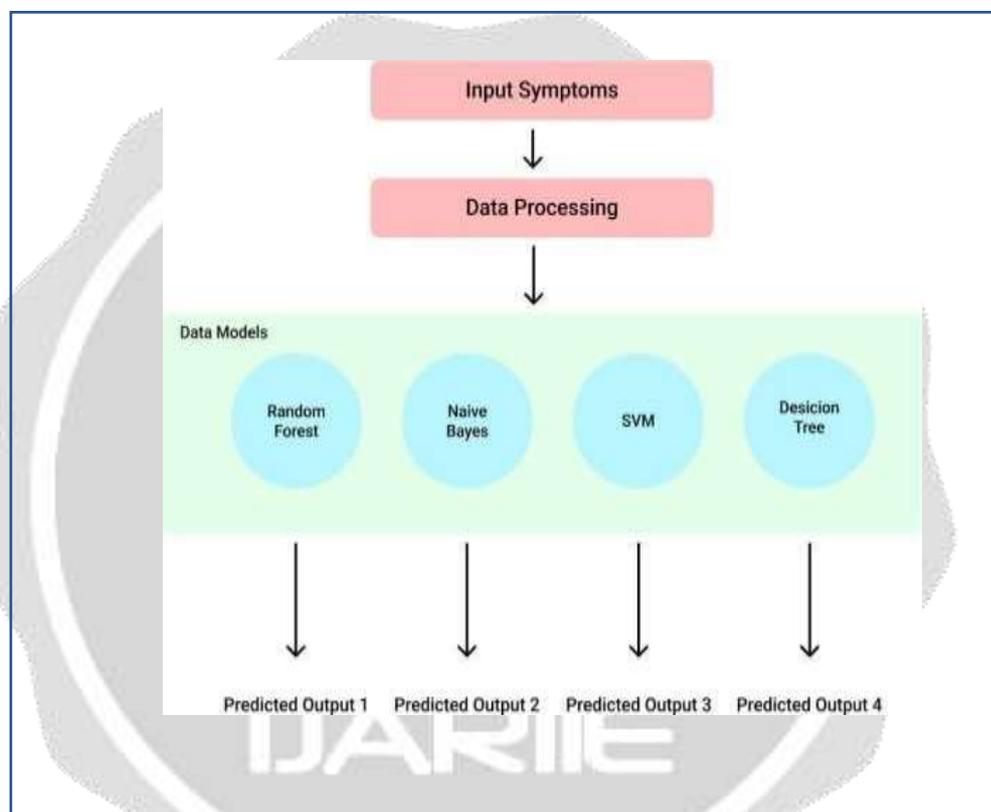


Fig 4: Disease Prediction

By taking in consideration a bit by bit information dataset ,ML helps in finding out required result .[4] predicting the disease becomes easy by taking advantages of various algorithm provided by ML.

The analysis needs to be accurate as finding out the correct disease of the person is important .Some symptoms may remain same for various diseases and some may be unique.[3]

By developing classifier system using Machine Learning is to immensely help to solve issues related to health and also helpsus to find quick results effectively.

Literature Survey/Related Work			
Sr. No.	Reference Name	Seed Idea/Work description	Problem found
1.	Disease Prediction using Machine Learning Algorithms	The development and exploitation of several prominent Data mining techniques in numerous real-world application areas (e.g. Industry, Healthcare and Bio science) has led to the utilization of such techniques in machine learning environments.	A comprehensive comparative study yield a correct result yet not perfect
2.	Heart Disease Prediction Using Machine Learning Algorithms	Heart plays significant role in living organisms. Diagnosis and prediction of heart related diseases requires more precision, perfection and correctness.	Decision tree is one of the nonparametric machine learning algorithm but as we know it suffers from the problem over fitting but it cloud be solve by some over fitting removable techniques.
3.	Symptoms Based Disease Prediction Using Machine Learning Techniques	Computer Aided Diagnosis (CAD) is quickly evolving, diverse field of study in medical analysis	In maintaining generalized knowledge, statistical models are not efficient, coping with missing values and broad data points.

Fig 5: Survey Table

V. PROPOSED SYSTEM & ARCHITECTURE

Patients could enter specific symptoms related to disease and based on symptoms recommendations of hospital's is done. All patients previous records can be maintained.

Python is used which is platform independent language, so it can easily work with different platforms easily. Logging with wrong or with any of the Incorrect credentials will not allow the user to access thus, Increasing and maintaining security.

VI. OVERVIEW OF PROJECT

- After user Login/Sign up, their correct credentials is been checked.
- If credentials has been entered correctly, user will be allowed the access to the home page.
- Then user are allowed to either Access records or Analyze disease.
- Accessed records hold the users medical history/ past medical session details.
- Under Analyze Disease, user can input symptoms and depending on the symptoms analysis on data set is done.
- After process of analysis, the disease is predicted suggesting nearby hospitals.
- Before Logging out user can store disease and hospital data in users database.

VII. CONCLUSION

Health being an essential part of our life, it is important to treat the diseases correctly when infected. This system helps in finding the disease affected to the user by taking advantages of the advancement technologies like machine learning in getting the accurate results.

IX. REFERENCES

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