# Patient's Sickness prediction System using machine Learning

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**ABSTRACT:** In the modern world, with the rapid development maintaining the healthy life is the one of the time-consuming tasks. People avoid the heath part. Machine learning will help in regular maintaining of the person heath and help in regulating the health lifestyle. The elderly patients, rural patients and disabled people who can't reach to the Hospital in emergency situations can take benefit from this technology for their treatment.
This helps in predicts diseases based on the information provided by the users based on the symptoms enter into the web system. It also helps in understanding the sort of disease, he/she is unaware of. It's a system which gives the ideas and tips to take care of the health of the user and it provides how to seek out disease using this prediction. so just by entering the symptoms and every one other useful information the user can get to understand the disease he/she is affected by and therefore the health industry also can get enjoy this technique by just asking the symptoms from the user and entering within the system and in only few seconds they will tell the precise and up to some extent the accurate diseases.

## I.  INTRODUCTION:
In smart cities, the hospitals are smart such that patient healthcare can be monitored remotely by using machine learning.
Here some of the things that this system can do:
- Entering Symptoms/Information
- Diseases Predication

Entering Symptoms: Once user successfully open the system then he/she has to select the symptoms as per the given drop-down menu.
Disease prediction: The predictive model predicts the disease of a person and gives output as might have disease, not disease, depends on the symptoms entered by the user.
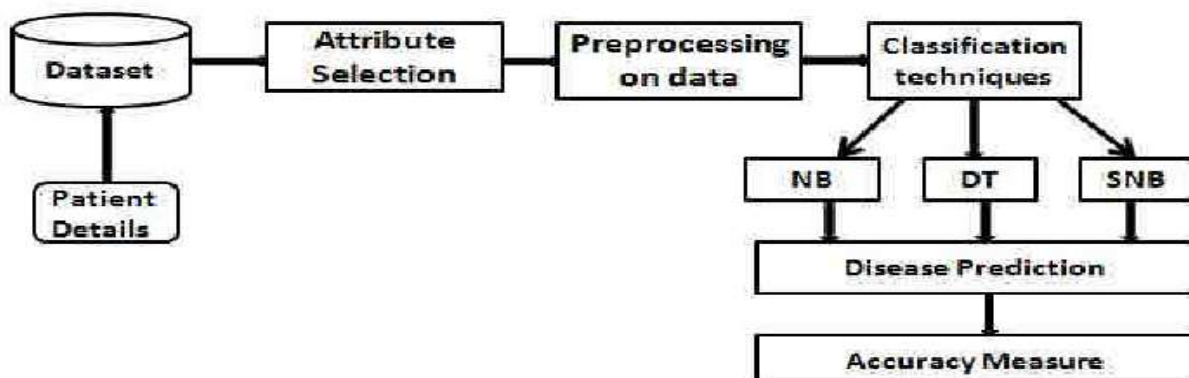
## IV.  PROPOSED SYSTEM



Fig (1): Predictions of heart disease

The fig (1) shows the flowchart of prediction of heart disease by providing the symptoms to the web. Heart Disease Prediction using machine learning is implemented using python completely. The form is created using html and css with flask integration. After that user needs

to enter the details in the form to get respective accurate output. This prediction is basically done with the help of 3 algorithms of machine learning such as Decision Tree, Random Forest, Logistic Regression. When user enter all the symptoms then he needs to press the buttons of respective algorithm, for example there are 3 buttons for 3 algorithms, if user enters all symptoms and presses only Random Forest's button then the result will be provided only calculating using that algorithm, like this we have used three algorithms to provide clearer picture of the results and user needs to be satisfied with his predicted result.
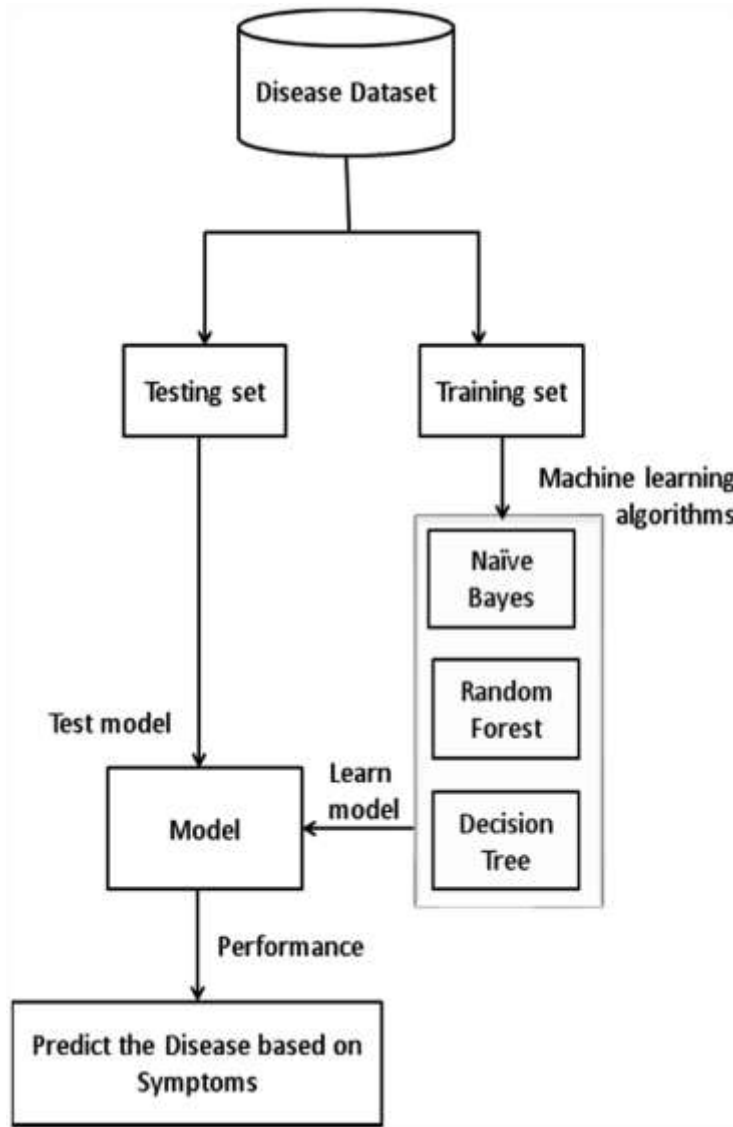


Fig (2) Disease prediction based on symptoms using machine learning

Fig (2) shows the block diagram of system used to predict disease based on symptoms provided by the user. Two set were provided called the testing set and training set, which further test the symptoms provided by the user and training set used different machine learning algorithms to predict the diseases. The result from this flowchart helps in predicting the disease based on the symptoms.

## II. RESULT & CONCLUSION:

The healthcare system is used to design the patient's health into the web system and fig (3) shows the result of patient's heart rate after monitoring through the system.
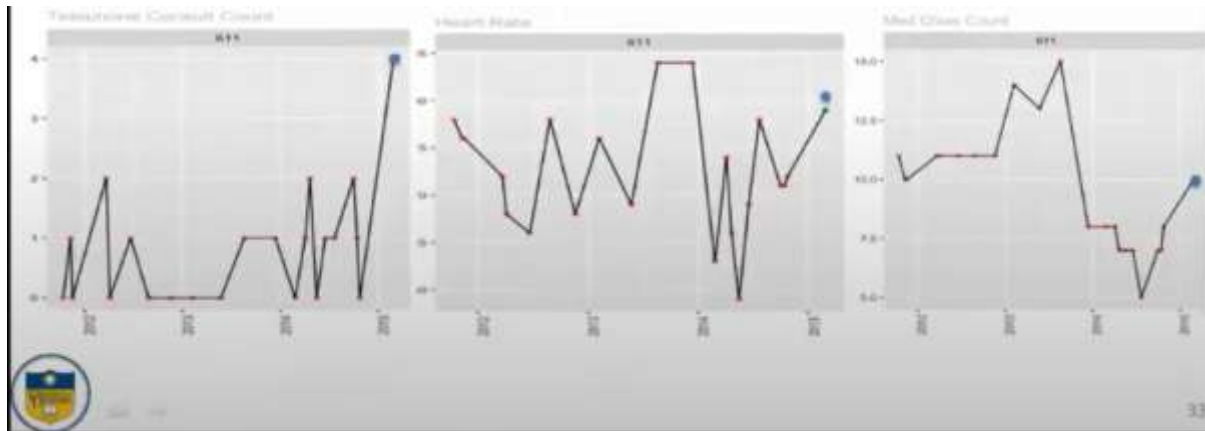
Fig (3): Patient's heart rate monitoring

The graph obtained determine the patient's heart beats, if the rate exceed to the required value the patient's will be alarmed. Furthermore, using the previous recorded data doctor can recommend the solution to the patients before getting into worst situation.

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