R Programming IA2

Heart Disease Prediction

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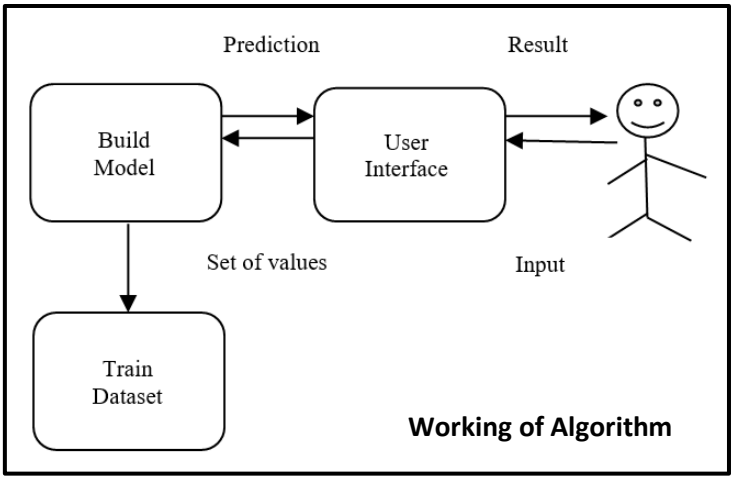
Problem Definition

Heart disease is considered as one of the major causes of death throughout the world. It cannot be easily predicted by the medical practitioners as it is a difficult task which demands expertise and higher knowledge for prediction. An automated system in medical diagnosis would enhance medical efficiency and also reduce costs. We will design a system that can efficiently discover the rules to predict the risk level of patients based on the given parameters about their health. The goal is to extract hidden patterns by applying data mining techniques, which are noteworthy to heart diseases and to predict the presence of heart disease in users and patients.

Algorithm Used: Decision Trees

A decision tree is a flowchart-like structure in which each internal node represents a "test" on an attribute, each branch represents the outcome of the test, and each leaf node represents a class label (decision taken after computing all attributes). The paths from root to leaf represent classification rules.

In this assignment, we have used the decision tree to classify the patient according to the 14 parameters provided by the user.



Conclusion

By using the decision tree algorithm, we were able to successfully analyse the heart diseases of the individual and the result was obtained which predicted the risk of heart disease based on the parameters provided by the user.