

Visualizing And Predicting Heart Diseases With An Interactive Dash Board

LITERATURE SURVEY:

A study in 2016 found that human beings are collectively generated data more than ten exabytes, or 5×10^{18} bytes from various sources (Lyman and Varian 2003). Exploratory Data Analysis (EDA) is a method to analyze data using advanced techniques to expose hidden structure, enhances the insight into a given dataset, identifies the anomalies and builds parsimonious models to test the underlying assumptions. Exploratory Data Analysis (EDA) is classified into Graphical or non-graphical and Univariate or multivariate. Univariate data consider one data column at a time while multivariate method considers more than two variables while analyzing. The diagnostic methods of diseases are of two types namely, Invasive and Non-invasive. Invasive diagnostic method includes incise procedures in which instruments are used to cut the skin, mucus membrane and connective tissues. In contrast, non-invasive methods are used to diagnose diseases without opening the skin. Some of the machine learning algorithms based on non-invasive methods are Support Vector Machine (SVM), K-means clustering, K-Nearest Neighbour (KNN), Artificial Neural Network (ANN), Naive Bayes, Logistic Regression and rough set. Predicting and diagnosing heart disease is the biggest challenge in the medical industry and it is based on factors like physical examination, symptoms and signs of the patient [1-3]. Factors which influence heart diseases are cholesterol level of the body, smoking habit, and obesity, family history of diseases, blood pressure and working environment. Machine learning algorithms play a vital and accurate role in predicting heart disease [4]. The advancement of technologies allows machine language to pair with big data tools to handle unstructured and exponentially growing data[5]. In the paper, K means clustering method is proposed in big data environment and the visualization is made with the tableau dashboard.

REFERENCES:

- [1] V. Manikantan & S.Latha, "Predicting the Analysis of Heart Disease Symptoms Using Medicinal Data Mining Methods", International Journal on Advanced Computer Theory and Engineering, Volume-2, Issue-2, pp.5-10, 2013.
- [2] Dr.A.V.Senthil Kumar, "Heart Disease Prediction Using Data Mining preprocessing and Hierarchical Clustering", International Journal of Advanced Trends in Computer Science and Engineering, Volume-4, No.6, pp.07-18, 2015.
- [3] Uma.K, M.Hanumathappa, "Heart Disease Prediction Using Classification Techniques with Feature Selection Method", Adarsh Journal of Information Technology, Volume-5, Issue-2, pp.22-29, 2016
- [4] Himanshu Sharma, M.A.Rizvi, "Prediction of Heart Disease using Machine Learning Algorithms:A Survey", International Journal on Recent and Innovation Trends in Computing and Communication, Volume5, Issue-8, pp.99-104, 2017.
- [5] S.Suguna, Sakthi Sakunthala.N, S.Sanjana, S.S.Sanjhana, "A Survey on Prediction of Heart Disease using Big data Algorithms", International Journal of Advanced Research in Computer Engineering & Technology, Volume-6, Issue-3, pp.371-378, 2017