IDEATION PHASE

LITERATURE SURVEY

Date	02 September 2022
Team ID	PNT2022TMID54045
Project Name	Visualizing and Predicting Heart Diseases with an Interactive Dashboard
Maximum Marks	4 Marks

LITERATURE SURVEY: 1

NAME OF THE JOURNAL : Efficient Medical Diagnosis of Human Heart Diseases Using Machine Learning Techniques With and Without GridSearchCV

AUTHOR / PUBLISHER : G. N. Ahmad, H. Fatima, S. Ullah, A. Salah Saidi and Imdadullah

YEAR OF PUBLICATION : 2022

INFERENCE REVIEW :

Predicting cardiac disease is considered one of the most challenging tasks in the medical field. It takes a lot of time and effort to figure out what's causing this, especially for doctors and other medical experts. In this paper, various Machine Learning algorithms such as LR, KNN, SVM, and GBC, together with the GridSearchCV, predict cardiac disease. The system uses a 5-fold cross-validation technique for verification. A comparative study is given for these four methodologies. It is found in the analysis that the Extreme Gradient Boosting Classifier with GridSearchCV gives the highest and nearly comparable testing and training accuracies as 100% and 99.03% for both the datasets Moreover, it is found in the analysis that XGBoost Classifier without GridSearchCV gives the highest and nearly comparable testing and training accuracies as 98.05% and 100%. The primary aim of this paper is to develop a unique model creation technique for solving real-world problems.

LITERATURE SURVEY: 2

NAME OF THE JOURNAL : **Prediction and Analysis of Heart Disease using SVM Algorithm.**

AUTHOR / PUBLISHER : **Madhura Patil, Rima Jadhav, Vishakha Patil, Aditi Bhawar, Mrs. Geeta Chillarges**

YEAR OF PUBLICATION : **2019**

INFERENCE REVIEW :

Heart disease prediction using data mining is one of the most interesting and challenging tasks. The shortage of specialists and high wrongly diagnosed cases has become the need to develop a fast and efficient detection system. According to past system the integration of clinical decision support with computer based patient record can reduce medical errors and it can be made more precise to enhance the patient's safety. We are providing a system which can help for prediction of heart disease by considering risky factor associated with heart disease. Here system applies support vector machine algorithm on historical information/data of patient and it provides features like Age, Sex, Smoking, Overweight, Alcohol Intake, Bad Cholesterol, Blood Pressure and Heart Rate to make prediction of coronary heart disease with higher accuracy .They are implementing a system which will help to predict heart disease depending on the patients clinical data related to the factor associated with heart disease. By using medical dataset of the patients such as age, sex, blood pressure, overweight and blood sugar and by applying SVM classifier they can predict that the patient will get a heart disease or not. In addition to that classification accuracy, sensitivity, and specificity of the SVM have been found to be high thus making it a superior alternative for the diagnosis.

LITERATURE SURVEY: 3

NAME OF THE JOURNAL : Heart Disease Prediction using Machine Learning

AUTHOR / PUBLISHER : Aman Preet Gulati

YEAR OF PUBLICATION : 2022

INFERENCE REVIEW :

In this paper the author is closely working with the heart disease prediction by looking into the heart disease dataset. From that dataset they have derived various insights that help us to know the weightage of each feature and how they are interrelated to each other but our aim is to detect the probability of person who will be affected by a severe heart problem or not .The Heart Disease prediction will have the following key takeaways :Data insight, EDA (Exploratory data analysis) Feature engineering , Model building. They carried out data visualization and data analysis of the target variable, age and other features. They also carried out a complete feature engineering part in this article which summons all the valid steps needed for further steps i.e. model building. KNN model gives us the accuracy value of about 89%.

LITERATURE SURVEY: 4

NAME OF THE JOURNAL : Heart Disease Prediction using Exploratory Data Analysis

AUTHOR / PUBLISHER : R.Indrakumari ,T.Poongodi, Soumya Ranjan Jena

YEAR OF PUBLICATION : 2020

INFERENCE REVIEW :

In this paper, the risk factors that causes heart disease is considered and predicted using K-means algorithm and the analysis is carried out using a publicly available data for heart disease. The dataset holds 209 records with 8 attributes such as age, chest pain type, blood pressure, blood glucose level, ECG in rest, heart rate and four types of chest pain. To predict the heart disease, K-means clustering algorithm is used along with data analytics and visualization tool. The paper discusses the pre-processing methods, classifier performances and evaluation metrics. In the result section, the visualized data shows that the prediction is accurate.