S.no:1

Title of the paper: A novel approach for heart disease prediction using strength scores with significant predictors

Year of Publication: June 21, 2021

Journal name: PubMed Central

Authors: Armin Yazdani, Kasturi Dewi Varathan, Yin Kia Chiam, Asad Waqar Malik, Wan Azman Wan Ahmad

Theme: Visualizing and predicting heart diseases with an interactive dash board

Inference: This research contributed to obtaining the highest confidence score using significant features in WARM for heart disease prediction. Assigning appropriate weight scores have proven to improve the performance of confidence level in the prediction. A set of significant features with different weights to represent the strength of each of the features was used in heart disease prediction. To the best of our knowledge, this is the first study that made use of significant features in executing WARM. This research has also contributed to listing the top rules in predicting heart disease based on the UCI dataset. This is the first research that benchmarked the healthy rules and sick rules with the highest confidence scores. Future researches may look into predicting the risk levels of heart disease, as this will help medical practitioners and patients to gauge their heart disease severity. The algorithm used in this study for measuring weight can be further explored for use with other datasets to cater to other prediction models using the weighted approach. The machine learning techniques used in feature selection phase of this research is limited to the most popular techniques used in heart disease prediction

research. Future researchers should look into exploring other machine learning techniques in selecting the significant features.

S no:2

Title of the paper: Big Data Analytics in Heart Attack Prediction

Year of Publication: April 29, 2017

Journal name: Journal of Nursing & Care

Authors:

Cheryl Ann Alexander, Department of Nursing, University of Phoenix, USA.

Lidong Wang, Department of Engineering Technology, Mississippi Valley State University, USA

Theme: Visualizing and predicting heart diseases using data analytics

Inference: The analysis of voluminous, structured and unstructured data, as well as disorganized data has produced substantial discoveries. The absence of cross-border direction and technology integration demands standards to enable interoperability amid the elements of the big data value chain. Big data proposes vast promises for detecting interactions and nonlinearities in relationships among variables. Mobile devices, such as smart phones and tablets, and sensors, will continue to be the most indispensable tools available to deliver heart attack prediction and telecardiology services over wireless networks to reduce cardiovascular disease morbidity and mortality. The deployment of cloud computing has inexpensively facilitated the collaborative application of telecardiology between hospitals and has expanded services from regional to global. The most important factor, however, in the development and application of big data, telecardiology, sensor use, mobile phone or tablet use and landline use is patient privacy and to safeguard the patient's ability to direct and discover the use of his or her health care information. Care managers, specially trained nurses who are revolutionizing healthcare by empowering patients directly to change their lifestyle and habits based on evidentiary research and data are needed to assist patients in this new data-driven healthcare scene. Nurses have always been on the forefront of revolutionary medicine and in today's data-driven healthcare system, nurses are critical in assisting their patients to navigate the data landmines and empower them to change unhealthy habits and reach a more improved health status.

S no:3

TITLE OF THE PAPER: Heart Disease Prediction Using Exploratory Data Analysis

YEAR OF THE PUBLICATION: 1st of July 2020

JOURNAL NAME: Elsevier

AUTHOR NAMES: R.Indrakumari , T.Poongodi , Soumya Ranjan Jena

THEME : Visualising and Predicting heart disease with an interactive dashboard

INFERENCE :

Healthcare industries generate enormous amounts of data, so called big data that accommodates hidden knowledge or patterns for decision making. The huge volume of data is used to make decisions which are more accurate than intuition. Exploratory Data Analysis (EDA) detects mistakes, finds appropriate data, checks assumptions and determines the correlation among the explanatory variables. In the context, EDA is considered as analysing data that excludes inferences and statistical modelling. Analytics is an essential technique for any profession as it forecasts the future and hidden pattern. Data analytics is considered as a cost effective technology in the recent past and it plays an essential role in healthcare which includes new research findings, emergency situations and outbreaks of disease. The use of analytics in healthcare improves care by facilitating preventive care and EDA is a vital step while analysing data. In this paper, the risk factors that cause heart disease are considered and predicted using the K-means algorithm and the analysis is carried out using 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 heart disease, K-means clustering algorithm is used along with data analytics and visualisation tools. The paper discusses the pre-processing methods, classifier performances and evaluation metrics. In the result section, the visualised data shows that the prediction is accurate.

S.No.:4

Title of the paper: Visualization and Prediction of Heart Diseases Using Data Science Framework

Year of Publication: 2021

Journal Name: 2021 Second International Conference on Electronics and Sustainable Communication Systems (ICESC)

Authors: Vaibhav Gupta, Vaibhav Aggarwal, Shagun Gupta, Neeti Sharma, Kiran Sharma, Neetu Sharma

Theme: The leading cause of death in the developed world is heart disease. Therefore, there needs to be work done to help prevent the risks of having a heart attack or stroke.

Inference: The main aim of this paper is to use various classification algorithms of data science framework to somehow detect the chances of having a heart disease. Also, the main aim of this research paper is to find out the most efficient classification algorithm that can help us to detect heart diseases at early stage. This algorithm can be used on heart records of the patient or by using it on classification reports. This research was conducted and tested upon various algorithms to test its accuracy like Logistic Regression, Random Forest, Vector Support and XG-Boost. After applying these algorithms of prediction model has been developed.