

A LITERATURE SURVEY OF PREDICTING HEART DISEASE

Title: Visualizing and Predicting Heart Diseases with an Interactive Dash Board

Team Leader: Vaitheeswaran L M

Team Members: Kishore MG, Malolan BA, Ramachandran A, Vennkat Bharathi S

Introduction:

Heart disease defines a range of conditions that affect human heart. The name "heart disease" is often used commonly with the name "cardiovascular disease". Heart disease is a term that allow to a large number of medical circumstances related to heart. These medical circumstances characterize the irregular health condition that directly affects the heart and all its parts. Heart disease generally allows to some conditions that involve narrowed or blocked blood vessels which can lead to a heart attack, stroke or chest pain. Other heart conditions, such as those that affect your heart's muscle, valves or rhythm, also are considered forms of heart disease .There are various types of cardiovascular disease. The most similar types are heart failure (HF) and Coronary Artery Disease (CAD). The main root cause of heart failure (HF) is occur due to the blockade or narrowing down of coronary arteries. Coronary arteries also supply blood to the heart.

Literature Survey:

Bo Jin, Chao Che et al. (2018) proposed a “Predicting the Risk of Heart Failure With EHR Sequential Data Modeling” model designed by applying neural network. This paper used the electronic health record (EHR) data from real-world datasets related to congestive heart disease to perform the experiment and predict the heart disease before itself. We tend to used one-hot encryption and word vectors to model the diagnosing events and foretold coronary failure events victimization the essential principles of an extended memory network model. By analyzing the results, we tend to reveal the importance of respecting the sequential nature of clinical records [1].

Aakash Chauhan et al. (2018) presented “Heart Disease Prediction using Evolutionary Rule Learning”. This study eliminates the manual task that additionally helps in extracting the information (data) directly from the electronic records. To generate strong association rules, we have applied frequent pattern growth association mining on patient’s dataset. This will facilitate (help) in decreasing the amount of services and shown that overwhelming majority of the rules helps within the best prediction of coronary sickness [2].

Ashir Javeed, Shijie Zhou et al. (2017) designed “An Intelligent Learning System based on Random Search Algorithm and Optimized Random Forest Model for Improved Heart Disease Detection”. This paper uses random search algorithm (RSA) for factor selection and random forest model for diagnosing the cardiovascular disease. This model is principally optimized for using grid search algorithmic program.

Two forms of experiments are used for cardiovascular disease prediction. In the first form, only random forest model is developed and within the second experiment the proposed Random Search Algorithm based random forest model is developed. This methodology is efficient and less complex than conventional random forest model. Comparing to conventional random forest it produces 3.3% higher accuracy.

REFERENCES

- [1] Bo Jin ,Chao Che, Zhen Liu, Shulong Zhang, Xiaomeng Yin,And Xiaopeng Wei, “Predicting the Risk of Heart Failure WithEHR Sequential Data Modeling” ,IEEE Access 2018.
- [2] Aakash Chauhan , Aditya Jain , Purushottam Sharma ,Vikas Deep, “Heart Disease Prediction using Evolutionary Rule Learning”, “International Conference on "Computational Intelligence and Communication Technology" (CICT 2018).
- [3] Ashir Javeed, Shijie Zhou, Liao Yongjian, Iqbal Qasim,Adeeb Noor, Redhwan Nour4, Samad Wali And Abdul Basit , “An Intelligent Learning System based on Random Search Algorithm and Optimized Random Forest Model for Improved Heart Disease Detection” , IEEE Access 2017.