

ADAPTIVE CONVOLUTIONAL NEURAL NETWORK AND FEATURE SELECTION BASED HEART DISEASE PREDICTION

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Abstract - Nowadays, heart diseases are currently a major cause of death in the world. It can be mitigated by early heart disease diagnosis. A heart disease predicted at earlier stages not only helps the patients prevent it, but it can also help the medical practitioners learn the major causes of a heart attack and avoid it before its actual occurrence in patient.

There are many traditional methods of prediction for such illness but they are not looking sufficient. There is an urgent need of medical diagnosis system that can predict the heart diagnosis at an early stage and offers more accurate diagnosis than traditional methods. In this project, to address this problem to propose an Adaptive Convolutional Neural Network (ACNN) method is used to design an early stage prediction and medical diagnosis system. We propose a heart disease prediction algorithm that combines the embedded pre-processing and feature selection process. Pre-processing is used to remove unwanted records and feature selection is used to choose a subset of features significantly associated with heart disease. These features are fed into the Adaptive Convolutional Neural Network (ACNN) we built. The proposed ACNN method is concerned

with temporal data modeling by utilizing CNN for Heart Failure (HF) prediction at its earliest stage. Cardiovascular disease (CVD), despite major advances in diagnosis and treatment, and is still a major cause of morbidity and mortality around the world.

1.INTRODUCTION

Nowadays, heart diseases are currently a major cause of death in the world. It can be mitigated by early heart disease diagnosis. A heart disease predicted at earlier stages not only helps the patients prevent it. We propose a heart disease prediction algorithm that combines the embedded pre-processing and feature selection process. Pre-processing is used to remove unwanted records and feature selection is used to choose a subset of features significantly associated with heart disease. These features are fed into the Adaptive Convolutional Neural Network (ACNN) we built. The proposed ACNN method is concerned with temporal data modeling by utilizing

2. Body of Paper

Existing System :

To diagnose the HD as a result of the application is a classification based on a valid machine learning to reduce the mortality. In order to improve the predictive ability of the pre-processing machine learning model data, standardization of data it is very important.

Proposed system :

Heart disease (HD) is an important health problem, a lot of people are affected by these diseases around the world. To diagnose the HD as a result of the application is a classification based on a valid machine learning to reduce the mortality. In order to improve the predictive ability of the pre-processing machine learning model data, standardization of data it is very important. The proposed first step is pre-processing for eliminate the unwanted records. The term feature selection refers to the process of selecting the optimal features (i.e., only the most relevant features). Then the proposed ACNN algorithm is used to classify the heart disease patients. . However, the large amount of data makes manual analysis and prediction taxing and arduous.

3. CONCLUSIONS

The goal of this paper is early diagnosis of heart disease using a computer-assisted system. For such clinical data, imbalance is an imminent challenge that exists due to the limited availability of data. Such data imbalance adversely affects the performance of any state-of-the-art clinical classification model. Our proposed heart disease

prediction algorithm that combines the embedded pre-processing and feature selection process. Pre-processing is used to remove unwanted records and feature selection is used to choose a subset of features significantly associated with heart disease. These features are fed into the Adaptive Convolutional Neural Network (ACNN) we built. The performance of ACNN architecture is best among all other Support Vector Machine (SVM), Decision Tree (DT), and Logistic Regression (LR). The proposed ACNN method provide high performance compared with previous algorithm.

FUTURE ENHANCEMENT:

In the future, the study intended to estimate heart diseases utilizing improved DL algorithms approaches and larger datasets. Improved DL will then optimize as well as improve the forecast procedure in means of velocity.

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