

LITERATURE SURVEY

[1] The paper proposes an unsupervised framework to detect chronic kidney diseases. It compares the results of four unsupervised algorithms namely K-Means clustering, DB-Scan, Isolation Forest, and Autoencoder to determine the efficiency of each. Feature extraction is performed prior to processing the data to reduce the high dimensionality. The proposed method claims to achieve 99.3% accuracy and concludes that highest accuracy was given by K-Means algorithm compared to others.

[2] The paper proposes a deep neural network approach to detect chronic kidney disease. It uses Deep Belief Network (DBN) with modifications and Softmax as activation function. The deep network consists of 6 layers with 24,13,28,8,4,2 nodes respectively, the first and last layer being the input and output nodes. The paper claims to achieve a 98.5% accuracy.

[3] Chronic kidney disease is one of the severe problems with a high mortality rate. Early detection will help to cure the disease or even reverse the disease. Machine learning will provide an efficient solution for the early diagnosis of the disease. In this paper, they proposed machine learning methodologies for the early detection of chronic disease. They overcome the problem of missing values in the dataset by KNN imputation. They have used six machine learning models like support vector machine, k-nearest neighbor, logistic regression, random forest, feed forward neural network, naive bayes classifier. Among these models, the random forest model has the highest accuracy, thus they produced an integrated model which combines random forest and logistic regression to achieve better accuracy.

[4] Chronic kidney disease(CKD) is a disease that does not show any symptoms at all or few symptoms in the early stage, so it is difficult to predict and prevent the disease and if it is left unpredicted it could cause fatal damages to the human body. As machine learning is best in its analysis and prediction, it could provide a solution to this problem. In this paper, they downloaded the dataset from UCI repository. It includes 400 instances and 25 features. Out of these 25 features, only 14 are used to build the model. Here they used two machine learning models namely SVM and Decision Tree for prediction. Decision tree approach has an accuracy of 91.75% and the SVM approach has an accuracy of 96.75%

[5] Chronic Kidney Disease(CKD) has become a chronic disease with a steady growth rate among the population. It's crucial to develop effective methods for early prediction for CKD. We can utilize machine learning models for this. The steps involved in this process include data collection and preprocessing. This paper makes use of a missing handling method such as collaborative filtering and attribute selection. Then we have our feature selection following which the models are selected and trained. 11 models were tested out of which extra tree classifier and random forest classifier has the highest accuracy and minimal bias. This paper also highlights the importance of incorporating domain knowledge in both medicine and computer science when using Machine learning for early prediction of CKD

[6] Chronic kidney disease is one of the prevalent diseases in the world. As it does not reveal any symptoms in the early stage, most of the cases remain undiagnosed until the advanced stage. In this paper, they reviewed the existing machine learning models to diagnose chronic kidney disease and they proposed a method based on Extreme Gradient Boost(XGBoost) that satisfies three feature selection techniques for better and precise diagnosis.

References

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