Early Prediction for Chronic Kidney Disease Detection: A Progressive Approach to Health Management

Define Problem / Problem Understanding

LITERATURE SURVEY:

M. P. N. M. Wickramasinghe.et presents a methodology to control the disease using a suitable diet plan. In this research classifiers are constructed using different algorithms like Multiclass decision Jungle, Multiclass Decision Forest, Multiclass Neural Network and Multiclass Logistic regression. An allowable potassium zone is predicted depending on the blood potassium levels of the patient. The classification algorithms recommend a diet place based on the predicted potasium zone.

H. A. Wibawa.et proposed and evaluated Kernel – based Extreme Learning Machine(ELM) to Predict Chronic Kidney Disease. Performance of four kernels-based ELM, namely RBF-ELM, Linear-ELM, Polynomial-ELM, Wavelet-ELM are compared with the performance of standard ELM. The above methodologies were compared on metrics of sensitivity and specificity. Radial Basis Function Extreme Learning Machine (RBF-ELM) showed higher prediction rates. CKD increases the risk factors of Cardio Vascular Disease (CVD) like hypertension, diabetes mellitus, dyslipidemia, and metabolic syndrome. CKD also leads to End Stage Renal Disease (ESRD) which has no cure.

U. N. Dulhare.et extracted action rules based on stages but also predicted CKD by using naive Bayes with One R attribute selector which helps to prevent the advancing of chronic renal disease to further stages. It is said that the median survival time of past due-stage patients is simplest approximately three years. Evaluating exactly the condition of sufferers is of incredible importance as it might substantially assist to decide appropriate care, medications or medical interventions wished, which amongst them have a complicated interrelationship and have an impact on the final results of the person patient.