Early Detection of Chronic Kidney Disease

ABSTRACT

Chronic kidney Disease (CKD) means your kidneys are damaged and not filtering your blood the way it should. The primary role of kidneys is to filter extra water and waste from your blood to produce urine and if the person has suffered from CKD, it means that wastes are collected in the body. CKD is among the top 20 causes of death worldwide and affects approximately 10% of the world adult population. Due to the increasing number of people with CKD, effective prediction measures for the early diagnosis of CKD are required. This study assists experts in exploring preventive measures for CKD through early diagnosis using machine learning techniques. In this project we have developed a Deep Neural Network model that takes in all the features to detect whether the particular patient is affected by the chronic kidney disease or not. Evaluation is done on a patient's dataset containing 24 features like RBC count, blood pressure level, blood sugar level etc. Deep Neural Network's accuracy can be achieved by increasing the number of hidden layers in the model. Therefore, machine learning techniques are of great importance in the early detection of CKD. These techniques are supportive of experts and doctors in early diagnosis to avoid developing kidney failure.