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

Define Problem / Problem Understanding

Specify the business problem:

Chronic Kidney Disease (CKD) is a major medical problem and can be cured if treated in the early Stages. Usually, people are not aware that medical tests we take for different purposes could contain valuable information concerning kidney diseases. Consequently, attributes of various medical tests are investigated to distinguish which attributes may contain helpful information about the disease. The Information says that it helps us to measure the severity of the problem, the predicted survival of the patient after the illness, the pattern of the disease and work for curing the disease.

In todays world as we know most of the people are facing so many disease and as this can be cured if we treat people in early stages this project can use a pretrained model to predict the Chronic Kidney Disease which can help in treatments of peoples who are suffer from this disease.

Chronic kidney disease (CKD) means your kidneys are damaged and losing their ability to keep you healthy by filtering your blood. In the early stages of the disease, most people do not have symptoms. But as kidney disease gets worse, wastes can build up in your blood and make you feel sick. You may develop other problems, like high blood pressure, anemia, weak bones, poor nutritional health, and nerve damage. Because kidneys are vital to so many of the body's functions, kidney disease also increases your risk of having heart and blood vessel disease. While these problems may happen slowly and without symptoms, they can lead to kidney failure, which can appear without warning. Once kidneys fail, dialysis or a kidney transplant is needed to stay alive. Kidney failure is also called kidney failure with replacement therapy (KFRT).

The two main causes of kidney disease are diabetes and high blood pressure. 9 • These two conditions were the primary diagnosis in 76% of kidney failure cases between 2015–2017: 47% of new KFRT patients had a primary diagnosis of diabetes10, the leading cause of KFRT, while 29% of new KFRT patients had a primary diagnosis of hypertension10, the second leading cause of KFRT. • other conditions that can lead to KFRT are: glomerulonephritis (diseases that damage the kidney's filtering units), which are the third most common type of kidney disease; inherited diseases, such as polycystic kidney disease; malformations at birth that occur as a fetus develops; lupus and other immune diseases; obstructions such as kidney stones or an enlarged prostate; and repeated urinary tract infections 11, which can also lead to kidney infections and can cause long-term damage to the kidneys. • People with kidney disease are at greater risk for cardiovascular disease and death at all stages of kidney disease. Kidney disease and heart disease are linked and have common risk factors, such as diabetes and hypertension. Each condition can lead to or worsen the other.