

# PROBLEM STATEMENT

DOMAIN:DATA SCIENCE

Early Detection of Chronic Kidney  
disease using Machine Learning

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# INTRODUCTION

Chronic Kidney Disease refers to the kidneys' inability to fulfil their normal blood filtration role and other functions (CKD). The term "chronic" refers to the progressive deterioration of kidney cells over time. This is a severe renal failure in which the kidney no longer filters blood and there is a significant fluid accumulation in the body. This causes an abnormally high level of potassium and calcium salts in the body. High quantities of these salts in the body cause a variety of additional problems. The primary function of the kidneys is to filter excess water and wastes from the blood. This mechanism must work properly to balance the salts and minerals in our bodies. The proper salt balance is required to manage blood pressure, activate hormones, and create red blood cells, among other things. A high calcium concentration causes bone problems and cystic ovaries in women. CKD can also cause a sudden sickness or an allergy to specific medications. Acute is the medical term for this condition.

## PROBLEM STATEMENT

- Noncommunicable illnesses are the leading cause of early death, and CKD is the leading noncommunicable disease.
- Chronic Kidney Disease is a major concern for the global health care system.
- People with CKD must focus on implementing proven, cost-effective therapies to as many people as possible while taking into consideration restricted needs, human and financial resources.
- Chronic kidney disease (CKD) is now wreaking havoc on society and is spreading at an alarming rate.
- Various efforts have been undertaken to advance early therapy to prevent the condition from progressing to chronic disease.
- Recent research suggests that some of the negative outcomes can be avoided with early identification and treatment.