

Chronic Kidney Disease Detection using Machine Learning

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1. Introduction

The goal of this project is to accurately predict Chronic Kidney Disease (CKD) using machine learning with the help of clinical and laboratory data.

2. Dataset Overview

The dataset consists of 400 samples and 26 features, including haemoglobin levels, blood pressure, blood sugar, etc.

3. Tools Used

- Python, Jupyter Notebook
- Libraries: Pandas, NumPy, Scikit-learn
- Model: Random Forest Classifier

4. Feature Engineering: Renal Burden Index (RBI)

Introduced a new feature:

$$RBI = (Blood\ Urea + Serum\ Creatinine + Blood\ Glucose) / (Haemoglobin \times Specific\ Gravity)$$