Feature Selection Report

Date	10 July 2024
Team ID	SWTID1720190579
Project Title	Early Prediction of Chronic Kidney Disease Using Machine Learning
Maximum Marks	4 Marks

Initial Model Training Code, Model Validation and Evaluation Report

The initial model training code will be showcased in the future through a screenshot. The model validation and evaluation report will include classification reports, accuracy, and confusion matrices for multiple models, presented through respective screenshots.

Initial Model Training Code:

Paste the screenshot of the model training code

Model Validation and Evaluation Report:

Feature	Description	Selected (Yes/No)	Reasoning
Age	Patient's age in years	**Yes**	Age is a significant risk factor for chronic kidney disease.
BP	Blood pressure (mm Hg)	**Yes**	High blood pressure is a known risk factor for chronic kidney disease.
SG	Specific gravity of urine	**Yes**	Indicates kidney's ability to concentrate urine; important for diagnosis.

AL	Albumin levels in urine	**Yes**	High albumin levels in urine can be a sign of kidney disease.
SU	Sugar levels in urine	**Yes**	High sugar levels can be associated with diabetes, a risk factor.
RBC	Presence of red blood cells in urine	**Yes**	Can indicate kidney damage.
PC	Pus cells in urine	**Yes**	Indicates infection or inflammation in the urinary tract.
PCC	Pus cell clumps in urine	**Yes**	Indicates infection or inflammation in the urinary tract.
BA	Bacteria in urine	**No**	Bacteria presence alone is not a strong predictor in this context.
BGR	Blood glucose random	**Yes**	High glucose levels can indicate diabetes, a risk factor.
BU	Blood urea level	**Yes**	High levels can indicate kidney dysfunction
SC	Serum creatinine level	**Yes**	High levels indicate impaired kidney function
SOD	Sodium level in blood	**Yes**	Electrolyte balance is crucial for kidney function
POT	Potassium level in blood	**Yes**	Abnormal levels can indicate kidney issues
HEMO	Hemoglobin level	**Yes**	Low levels can indicate kidney disease or anemia
ANE	Anemia	**Yes**	Anemia is a common complication of chronic kidney disease
CLASSIFICATION	Classification of chronic kidney disease	**Yes**	The target variable for predictive modeling – is essential for the project's goal