

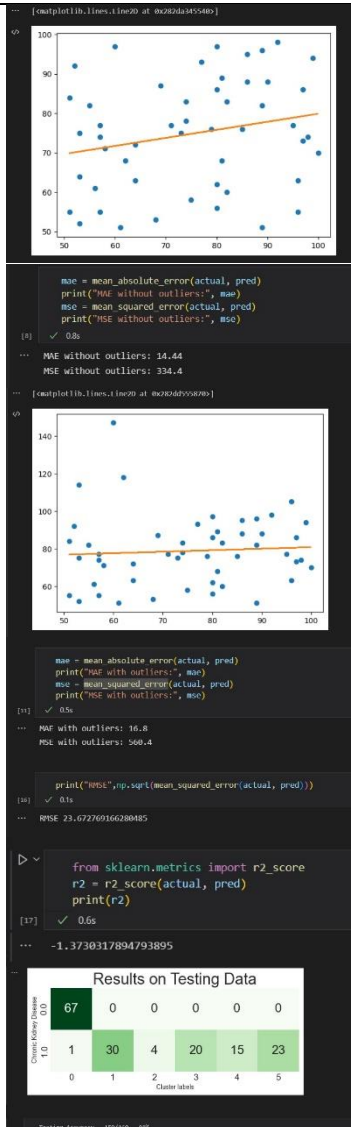
Project Development Phase

Model Performance Test

Date	19 November 2022
Team ID	PNT2022TMID48683
Project Name	Early Detection of Chronic Kidney Disease using Machine Learning
Maximum Marks	10 Marks

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No.	Parameter	Values	Screenshot
1.	Metrics	<p>Regression Model: MAE - 14.44, MSE -334.4, RMSE - 23.672769166280485, R2 score - -1.3730317894793895</p> <p>Classification Model: Accuracy Testing Score-99%, Training Score-99%, Classification Report – Unsupervised learning algorithm</p>	 <pre> [output lib, lines, line0 at 0x202d445540] In []: out = mean_absolute_error(actual, pred) print("MAE without outliers:", ma) mse = mean_squared_error(actual, pred) print("MSE without outliers:", mse) [4] ✓ 0.0s --- MAE without outliers: 14.44 MSE without outliers: 334.4 [output lib, lines, line0 at 0x202d445540] In []: out = mean_absolute_error(actual, pred) print("MAE with outliers:", ma) mse = mean_squared_error(actual, pred) print("MSE with outliers:", mse) [11] ✓ 0.0s --- MAE with outliers: 16.8 MSE with outliers: 560.4 [output lib, lines, line0 at 0x202d445540] In []: print("RMSE", np.sqrt(mean_squared_error(actual, pred))) [16] ✓ 0.0s --- RMSE 23.672769166280485 [output lib, lines, line0 at 0x202d445540] In []: from sklearn.metrics import r2_score r2 = r2_score(actual, pred) print(r2) [17] ✓ 0.0s --- -1.3730317894793895 Results on Testing Data Cluster Labels 0 1 2 3 4 5 0 67 0 0 0 0 0 1 1 30 4 20 15 23 Cluster labels Testing Accuracy - 100/100 - 99% </pre>

2. Tune the Model

Hyperparameter Tuning – PCA_Compound, Clustering

Validation Method – SVM_RBF,
SVM_Poly2, SVM_Poly3, Weighted
3NearestNeighbours, Weighted
8NearestNeighbours, Weighted
15NearestNeighbours, Native
Bayes, Logistic Regression,
Random Forest, Decision Tree

