

Project Development Phase Model Performance Test

Date	19 November 2022
Team ID	PNT2022TMID03961
Project Name	Project – University Admit Eligibility predictor
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	Regression Model: MAE - 0.04439100712864568 , MSE –0.003969262204179716 RMSE - ,0.063 R2 score - 0.8279343840569254 Classification Model: Confusion Matrix - , Accuray Score- & Classification Report -	<pre> from sklearn.metrics import r2_score, mean_squared_error, mean_absolute_error from math import sqrt RMSE = float(format(np.sqrt(mean_squared_error(y_test_orig, y_predict_orig)), '.3f')) MSE = mean_squared_error(y_test_orig, y_predict_orig) MAE = mean_absolute_error(y_test_orig, y_predict_orig) r2 = r2_score(y_test_orig, y_predict_orig) adj_r2 = 1-(1-r2)*(n-1)/(n-k-1) print('RMSE =', RMSE, '\nMSE =', MSE, '\nMAE =', MAE, '\nR2 =', r2, '\nAdjusted R2 =', adj_r2) </pre> <p> RMSE = 0.063 MSE = 0.003969262204179716 MAE = 0.04439100712864568 R2 = 0.8279343840569254 Adjusted R2 = 0.8047717049876654 </p>

2.	Tune the Model	Hyperparameter Tuning - Validation Method -	<pre> from sklearn import datasets from sklearn.tree import DecisionTreeClassifier from sklearn.model_selection import StratifiedKFold, cross_val_score X, y = datasets.load_iris(return_X_y=True) clf = DecisionTreeClassifier(random_state=42) sk_folds = StratifiedKFold(n_splits = 5) scores = cross_val_score(clf, X, y, cv = sk_folds) print("Cross Validation Scores: ", scores) print("Average CV Score: ", scores.mean()) print("Number of CV Scores used in Average: ", len(scores)) </pre> <p> Cross Validation Scores: [0.96666667 0.96666667 0.9 0.93333333 1. Average CV Score: 0.9533333333333334 Number of CV Scores used in Average: 5 </p>
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