

Project Development Phase Model Performance Test

Date	10 November 2022
Team ID	PNT2022TMID10940
Project Name	Machine Learning based Vehicle Performance Analyzer
Maximum Marks	10 Marks

Model Performance Testing:

S.No.	Parameter	Values	Screenshot
1.	Metrics	Regression Model: R2 score -	<p>Using random forest regression model</p> <pre>In [26]: rf_model = RandomForestRegressor() rf_model.fit(x_train, y_train) rf_r2 = rf_model.score(x_test, y_test) print("Random Forest R^2: {:.5f}".format(rf_r2)) Random Forest R^2: 0.83875</pre> <p>Using a simple linear model</p> <pre>In []: linear_model = LinearRegression() linear_model.fit(x_train, y_train) linear_r2 = linear_model.score(x_test, y_test) print("Linear Regression R^2: {:.1f}".format(linear_r2)) Linear Regression R^2: 0.8</pre> <p>Using a decision tree model</p> <pre>In []: tree_model = DecisionTreeRegressor() tree_model.fit(x_train, y_train) tree_r2 = tree_model.score(x_test, y_test) print("Decision Tree R^2: {:.5f}".format(tree_r2)) Decision Tree R^2: 0.73206</pre>
2.	Accuracy	Training Accuracy - 0.83855	<p>Using random forest regression model</p> <pre>In [26]: rf_model = RandomForestRegressor() rf_model.fit(x_train, y_train) rf_r2 = rf_model.score(x_test, y_test) print("Random Forest R^2: {:.5f}".format(rf_r2)) Random Forest R^2: 0.83875</pre>