Project Development Phase
Model Performance Test

Date	10 November 2022
Team ID	PNT2022TMID35586
Project Name	Project - Trip Based Modeling of Fuel Consumption in Modern Fleet Vehicles
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,
		MSE,
		RMSE,
		R2 score
			1) Linear Regression
			In [16]:
			`from sklearn.linear_model import LinearRegression`
			`model=LinearRegression()`
			`model.fit(x_train,y_train)`
			`y_pred=model.predict(x_test)`
			In [18]:
			`find_accuracy(y_test,y_pred)`
			Results of sklearn.metrics:
			MAE: 0.5746966611396568
			MSE: 0.5479636225308521
			RMSE: 0.7402456501262619
			R-Squared: 0.12354862570779879
			2) Decision Tree
			In [27]:
			`from sklearn.tree import DecisionTreeRegressor as DTR`
			`dtr=DTR(random_state=0)`
			`dtr.fit(x_train,y_train)`
			Out[27]:
			DecisionTreeRegressor(random_state=0)
			In a Jupyter environment, please rerun this cell to show the HT
			On GitHub, the HTML representation is unable to render, please
			In [29]:
			`y_pred=dtr.predict(x_test)`
			`find_accuracy(y_test,y_pred)`
			Results of sklearn.metrics:
			MAE: 0.5487179487179489
			MSE: 0.5564102564102564
			RMSE: 0.7459291229133345
			R-Squared: 0.11003848823269613

			3) Random Forest In [24]: ``` from sklearn.ensemble import RandomForestRegressor as rf rf_model=rf(n_estimators=100,random_state=0) rf_model.fit(x_train,y_train) ``` Out[24]: RandomForestRegressor(random_state=0) **In a Jupyter environment, please rerun this cell to show the HTML** **On GitHub, the HTML representation is unable to render, please tr** In [25]: ``` y_pred=rf_model.predict(x_test) find_accuracy(y_test,y_pred) ``` Results of sklearn.metrics: MAE: 0.405172466422466 MSE: 0.2784897491750975 RMSE: 0.5277212798202262 R-Squared: 0.55456400141405