Project Development Phase
Model Performance Test

Date	08 November 2023
Team ID	Team - 593170
Project Name	Walmart Sales Analysis for Retail Industry 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	**Regression Model: Random Forest**
		
		MAE - 1481.72
		MSE - 9122913.59
		RMSE - 3020.41
		R2 score - 0.96
			`[134] rf_acc = rf.score(X_test,y_test)*100`
			`print("Random Forest Regressor Accuracy - ",rf_acc)`
			
			`Random Forest Regressor Accuracy - 96.57346833520157`
			
			`[135] y_pred = rf.predict(X_test)`
			
			`[136] print("MAE" , metrics.mean_absolute_error(y_test, y_pred))`
			`print("MSE" , metrics.mean_squared_error(y_test, y_pred))`
			`print("RMSE" , np.sqrt(metrics.mean_squared_error(y_test, y_pred)))`
			`print("R2" , metrics.explained_variance_score(y_test, y_pred))`
			
			`MAE 1481.7216206262044`
			`MSE 9122913.598697275`
			`RMSE 3020.416130055141`
			`R2 0.9657347418014797`

	Metrics	**Regression Model: XGBoost**
		
		MAE - 2450.05
		MSE - 15363790.48
		RMSE - 3919.66
		R2 score - 0.94
			`[141] xgb_acc = xgbr.score(X_test,y_test)*100`
			`print("XGBoost Regressor Accuracy - ",xgb_acc)`
			
			`XGBoost Regressor Accuracy - 94.22941870205291`
			
			`[142] y_pred = xgbr.predict(X_test)`
			
			`[143] print("MAE" , metrics.mean_absolute_error(y_test, y_pred))`
			`print("MSE" , metrics.mean_squared_error(y_test, y_pred))`
			`print("RMSE" , np.sqrt(metrics.mean_squared_error(y_test, y_pred)))`
			`print("R2" , metrics.explained_variance_score(y_test, y_pred))`
			
			`MAE 2450.055596192737`
			`MSE 15363790.487115387`
			`RMSE 3919.6671398366707`
			`R2 0.9422979378584959`