Project Development Phase
Model Performance Test

Date	19 November 2023
Team ID	PNT2022TMID-591758
Project Name	Horology 2.0: Forecasting The Future of SmartWatch Prices
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.	Model Summary	XGBoost Regressor is the regression used. **Parameter Values :** n_estimators: 1000 learning_rate: 0.06 max_depth: 2 subsample: 0.7 colsample_bytree: 0.4 colsample_bylevel: 0.5 max_leaves: 3 random_state: 1	XGBRegressor `XGBRegressor(base_score=None, booster=None, callbacks=None, colsample_bylevel=0.5, colsample_bynode=None, colsample_bytree=0.4, device=None, early_stopping_rounds=None, enable_categorical=False, eval_metric=None, feature_types=None, gamma=None, grow_policy=None, importance_type=None, interaction_constraints=None, learning_rate=0.06, max_bin=None, max_cat_threshold=None, max_cat_to_onehot=None, max_delta_step=None, max_depth=2, max_leaves=3, min_child_weight=None, missing=nan, monotone_constraints=None, multi_strategy=None, n_estimators=1000, n_jobs=None, num_parallel_tree=None, random_state=1, ...)`

2.	Accuracy	**Training Accuracy :**
		R-squared (R2): 0.9219
		Root Mean Squared Error (RMSE): 57.27
		Validation Accuracy -
		R-squared (R2): 0.8051
		Root Mean Squared Error (RMSE): 83.25
			`# training Score`
			`error_score_xgb_train=r2_score(y_train,predict_train_xgb)`
			`print("R2 erroor is:",error_score_xgb_train)`
			`mse=mean_squared_error(y_train,predict_train_xgb)`
			`rmse_xgb_train=np.sqrt(mse)`
			`print('Root Mean Squared Error:',rmse_xgb_train)`
			R2 erroor is: 0.9219250785587862
			Root Mean Squared Error: 57.26687782255483
			`#testing score`
			`error_score_xgb_test=r2_score(y_test,predict_test_xgb)`
			`print("R2 erroor is:",error_score_xgb_test)`
			`mse=mean_squared_error(y_test,predict_test_xgb)`
			`rmse_xgb_test=np.sqrt(mse)`
			`print('Root Mean Squared Error:',rmse_xgb_test)`
			R2 erroor is: 0.805145250048114
			Root Mean Squared Error: 83.2546401826171