

## Project Development Phase

### Model Performance Test

|               |                             |
|---------------|-----------------------------|
| Date          | 15 November 2022            |
| Team ID       | PNT2022TMID48007            |
| Project Name  | Car resale value prediction |
| 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   | <b>Regression Model:</b><br><br>MAE – 1325.112086905962<br>MSE - 9577053.62710202<br>RMSE – 3094.6815065692977<br>R2 score – 0.8661221626879432<br>RMSLE - 8.03744027403009<br>ADJ_R2_score - 0.8661152969113608 | <pre>def find_scores(Y_actual, Y_pred, X_train):<br/>    scores = dict()<br/>    mae = mean_absolute_error(Y_actual, Y_pred)<br/>    mse = mean_squared_error(Y_actual, Y_pred)<br/>    rmse = np.sqrt(mse)<br/>    rmsle = np.log(rmse)<br/>    r2 = r2_score(Y_actual, Y_pred)<br/>    n, k = X_train.shape<br/>    adj_r2_score = 1 - ((1-r2)*(n-1)/(n-k-1))<br/><br/>    scores['mae'] = mae<br/>    scores['mse'] = mse<br/>    scores['rmse'] = rmse<br/>    scores['rmsle'] = rmsle<br/>    scores['r2'] = r2<br/>    scores['adj_r2_score'] = adj_r2_score<br/><br/>    return scores</pre> <pre>model = LGBMRegressor(boosting_type="gbdt", learning_rate=0.07, metric="rmse", n_estimators=300, objective="root_mean_squared_error")<br/>model.fit(X_train, Y_train)<br/><br/>Y_pred = model.predict(X_test)<br/><br/>find_scores(Y_test, Y_pred, X_train)</pre> <p>C:\Users\gurun\anaconda3\lib\site-packages\sklearn\utils\validation.py:993: DataConversionWarning: A column-vector y was passed when a 1d array was expected. Please change the shape of y to (n_samples, ), for example using ravel().<br/>y = column_or_1d(y, warn=True)</p> <pre>{'mae': 1325.112086905962,<br/> 'mse': 9577053.62710202,<br/> 'rmse': 3094.6815065692977,<br/> 'rmsle': 8.03744027403009,<br/> 'r2': 0.8661221626879432,<br/> 'adj_r2_score': 0.8661152969113608}</pre> |