Project Development Phase Model Performance Test

Date	9 th November,2023
Team ID	Team - 593038
Project Name	ML Model For Occupancy Rates And Demand In The Hospitality Industry
Maximum Marks	10 Marks

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No.	Parameter	Values	Screenshot
S.No. 1)	Parameter Model Summary	Values	In [41]: X_test=sc.transform(X_test) In [42]: from sklearn.tree import DecisionTreeClassifier DC=DecisionTreeClassifier(random_state=0) DC.fit(X_train,Y_train) Out[42]:
			Used Decision Tree Classifier:- A decision forest, also known as a random forest, is a machine learning ensemble technique that works by building a large number of decision trees during training and producing a class that represents the mean prediction (regression) or mode of the classes (classification) of the individual trees. To put it succinctly, imagine a forest of decision trees collaborating to provide predictions that are more reliable and accurate than those made by a single decision tree.

```
In [73]: X_train_predict=DC.predict(X_train)
                                                     In [74]: X_train_predict
                                                     Out[74]: array([0, 0, 0, ..., 0, 1, 1], dtype=int64)
2)
         Accuracy
                                                     In [75]: acc_train=accuracy_score(Y_train,X_train_predict)
                          Training
                          Accuracy:-
                                                     In [76]: acc_train
                                                     Out[76]: 1.0
                                                     In [ ]:
                                             In [43]: X_test_predict=DC.predict(X_test)
                                             In [44]: X_test_predict
                                             Out[44]: array([1, 1, 0, ..., 0, 0, 0], dtype=int64)
                                             In [45]: from sklearn.metrics import accuracy_score
                                             In [46]: acc=accuracy_score(Y_test,X_test_predict)
                          Testing
                                             In [47]: acc
                          Accuracy:-
                                             Out[47]: 0.9914057704112953
```