

Project Development Phase
Model Performance Test

Date	10 November 2022
Team ID	PNT2022TMID32768
Project Name	Project – Web Phishing Detection
Maximum Marks	10 Marks

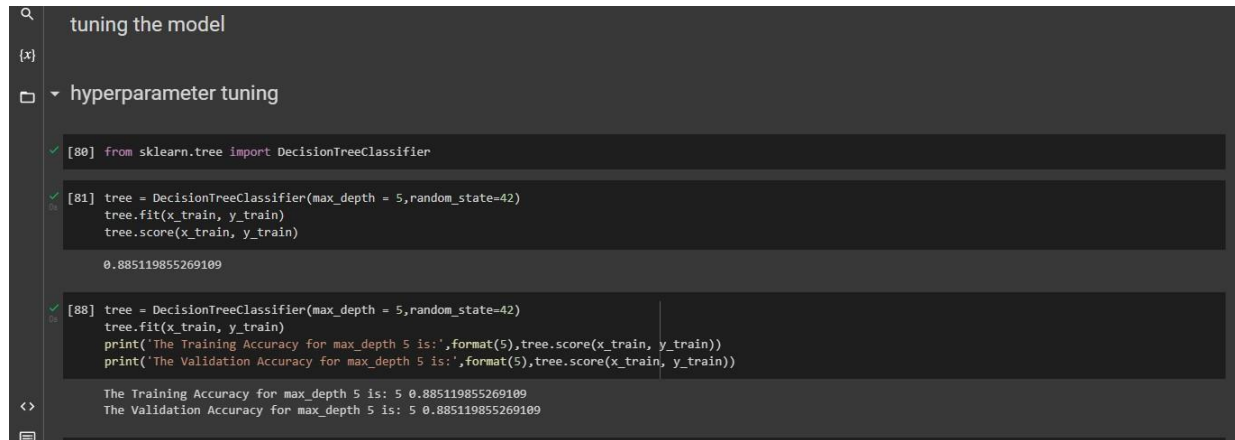
Model Performance Testing:

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

S.No.	Parameter	Values
1.	Tune the model	Hyper parameter Tuning - Validation Method
2.	Metrics	Regression Model: Logistic Regression MAE – 0.26142017186793304 MSE - 0.5228403437358661 RMSE - 0.7230769971004928 R2 score - - 2.888673182487615 Classification Model: Decision Tree Classifier Confusion Matrix - array([[61, 249], [26, 1875]]) Accuracy Score- 0.8756218905472637

1.TUNE THE MODEL: DECISION TREE CLASSIFIER

HYPERPARAMETER TUNING:



The screenshot shows a Jupyter Notebook interface with a search bar at the top containing the text "tuning the model". Below the search bar, a sidebar on the left lists the notebook's sections: "{x}" and "hyperparameter tuning". The "hyperparameter tuning" section is expanded, showing three code cells. The first cell, labeled [80], imports the DecisionTreeClassifier from sklearn.tree. The second cell, labeled [81], creates a DecisionTreeClassifier with max_depth = 5 and random_state = 42, fits it to the training data, and prints the training accuracy, which is 0.885119855269109. The third cell, labeled [88], does the same but also prints the validation accuracy, which is also 0.885119855269109. The output of the third cell is displayed below the code, showing the training and validation accuracies for max_depth 5.

```
[80] from sklearn.tree import DecisionTreeClassifier

[81] tree = DecisionTreeClassifier(max_depth = 5, random_state=42)
tree.fit(x_train, y_train)
tree.score(x_train, y_train)

0.885119855269109

[88] tree = DecisionTreeClassifier(max_depth = 5, random_state=42)
tree.fit(x_train, y_train)
print('The Training Accuracy for max_depth 5 is:', format(5), tree.score(x_train, y_train))
print('The Validation Accuracy for max_depth 5 is:', format(5), tree.score(x_train, y_train))

The Training Accuracy for max_depth 5 is: 5 0.885119855269109
The Validation Accuracy for max_depth 5 is: 5 0.885119855269109
```