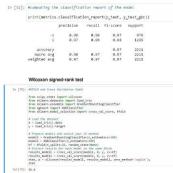
Project Development PhaseModel Performance Test

Date	13 November 2022	
Team ID	PNT2022TMID10436	
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	Screenshot
1.	Metrics	Classification Model:	
		Gradient Boosting Classification	
		Accuray Score- 97.4%	
2.	Tune the Model	Hyperparameter Tuning - 97%	
		Validation Method – KFOLD &	
		Cross Validation Method	

• METRICS: CLASSIFICATION REPORT: In [52]: #computing the classification report of the model

print(metrics.classification_report(y_test, y_test_gbc))

precision recall f1-score support

-1 0.99 0.96 0.97 976
1 0.97 0.99 0.98 1235

accuracy 0.97 2211
macro avg 0.98 0.97 0.97 2211
weighted avg 0.97 0.97 0.97 2211

PERFORMANCE:

TUNE THE MODEL – HYPERPARAMETER TUNING

VALIDATION METHODS: KFOLD & Cross Folding

Wilcoxon signed-rank test

```
In [78]: #KFOLD and Cross Validation Model
         from scipy.stats import wilcoxon
         from sklearn.datasets import load iris
         from sklearn.ensemble import GradientBoostingClassifier
         from xgboost import XGBClassifier
         from sklearn.model_selection import cross_val_score, KFold
         # Load the dataset
         X = load_iris().data
         y = load_iris().target
         # Prepare models and select your CV method
         model1 = GradientBoostingClassifier(n_estimators=100)
         model2 = XGBClassifier(n_estimators=100)
         kf = KFold(n splits=20, random state=None)
         # Extract results for each model on the same folds
         results_model1 = cross_val_score(model1, X, y, cv=kf)
         results model2 = cross val score(model2, X, y, cv=kf)
         stat, p = wilcoxon(results_model1, results_model2, zero_method='zsplit');
         stat
Out[78]: 95.0
```

5x2CV combined F test

f-value: 1.727272727272733 p-value: 0.2840135734291782