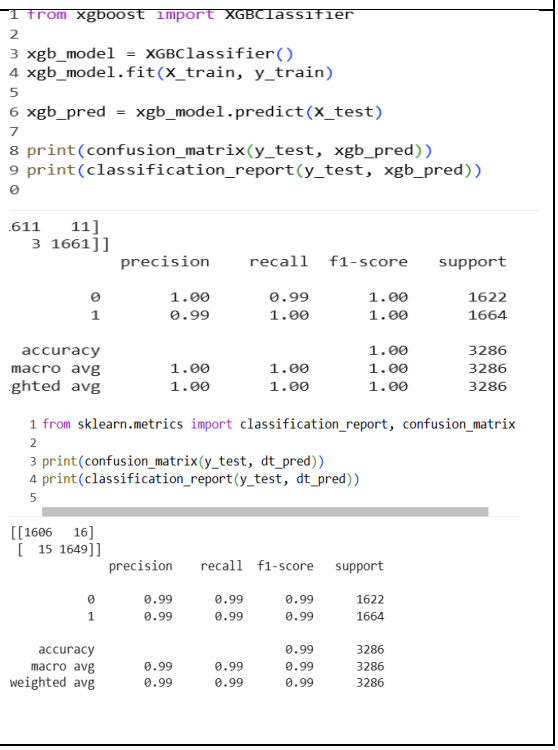
Project Development Phase
Model Performance Test

Date	18th Febraury 2026
Team ID	LTVIP2026TMIDS57900
Project Name	Online Payments Fraud Detection using Machine Learning
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	**Regression Model:** MAE - , MSE - , RMSE - , R2 score - **Classification Model:** Confusion Matrix - , Accuray Score- & Classification Report -	

```
from xgboost import XGBClassifier

xgb_model = XGBClassifier()
xgb_model.fit(X_train, y_train)

xgb_pred = xgb_model.predict(X_test)

print(confusion_matrix(y_test, xgb_pred))
print(classification_report(y_test, xgb_pred))
```

```
.611   11]
  3 1661]]
              precision    recall  f1-score   support

           0       1.00      0.99      1.00      1622
           1       0.99      1.00      1.00      1664

 accuracy                           1.00      3286
macro avg       1.00      1.00      1.00      3286
ghted avg       1.00      1.00      1.00      3286
```

```
from sklearn.metrics import classification_report, confusion_matrix

print(confusion_matrix(y_test, dt_pred))
print(classification_report(y_test, dt_pred))
```

```
[[1606   16]
 [  15 1649]]
              precision    recall  f1-score   support

           0       0.99      0.99      0.99      1622
           1       0.99      0.99      0.99      1664

    accuracy                           0.99      3286
   macro avg       0.99      0.99      0.99      3286
weighted avg       0.99      0.99      0.99      3286
```

2.	Tune the Model	Hyperparameter Tuning - Validation Method -	

```
from sklearn.model_selection import train_test_split

X_train, X_test, y_train, y_test = train_test_split(
    X, y,
    test_size=0.2,
    random_state=42
)

```