

Model Development Phase Template

Date	10 June 2024
Team ID	739643
Project Title	Online Payment Fraud Detection
Maximum Marks	4 Marks

Initial Model Training Code, Model Validation and Evaluation Report

The initial model training code will be showcased in the future through a screenshot. The model validation and evaluation report will include classification reports, accuracy, and confusion matrices for multiple models, presented through respective screenshots.

Initial Model Training Code:

```
from sklearn.ensemble import RandomForestClassifier
from sklearn.metrics import accuracy_score
rfc=RandomForestClassifier()
rfc.fit(x_train,y_train)
y_test_predict1=rfc.predict(x_test)
test_accuracy=accuracy_score(y_test,y_test_predict1)
test_accuracy
```

```
from sklearn.tree import DecisionTreeClassifier
dtc=DecisionTreeClassifier()
dtc.fit(x_train,y_train)
y_train_predict2=dtc.predict(x_train)
y_test_predict2=dtc.predict(x_test)
test_accuracy=accuracy_score(y_test,y_test_predict2)
test_accuracy
```

```
from sklearn.svm import SVC
from sklearn.metrics import accuracy_score
svc=SVC()
svc.fit(x_train,y_train)
y_test_predict4=svc.predict(x_test)
test_accuracy=accuracy_score(y_test,y_test_predict4)
test_accuracy
```

```
import xgboost as xgb
xgb1=xgb.XGBClassifier()
xgb1.fit(x_train,y_train1)
y_test_predict5=xgb1.predict(x_test)
test_accuracy=accuracy_score(y_test1,y_test_predict5)
test_accuracy
```

Model Validation and Evaluation Report:

Model	Classification Report	F1 Score	Confusion Matrix
Random Forest Classifier	0.9988435192598524	99%	-

Decision Tree Classifier	0.9986655991459834	99%	-
Extra Trees Classifier	0.9988435192598524	99%	-
XGB	0.9991103994306556	99%	-