

**Project Development Phase
Model Performance Test**

Date	10 November 2022
Team ID	PNT2022TMID26382
Project Name	Project – Statistical Machine learning approaches to Liver disease prediction
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: Confusion Matrix, Accuracy Score- & Classification Report – Accuracy score- 76%	Attached below
2.	Tune the Model	Hyperparameter Tuning – GridSearchCV Validation Method – GridSearchCV, XGBClassifier Accuracy score- 77.97%	Attached below

Screenshots:

```
In [25]: from sklearn.metrics import confusion_matrix, accuracy_score
```

```
In [26]: confusion_matrix(y_test, model.predict(X_test))
```

```
Out[26]: array([[40,  5],  
               [ 8,  6]], dtype=int64)
```

```
In [27]: print(f"Accuracy is {round(accuracy_score(y_test, model.predict(X_test))*100,2)}")
```

Accuracy is 77.97

```
In [24]: from sklearn.ensemble import RandomForestClassifier  
model = RandomForestClassifier(n_estimators=20)  
model.fit(X_train, y_train)
```

```
Out[24]: RandomForestClassifier(n_estimators=20)
```