

```
1
2 # Import base libraries
3 import pandas as pd
4 import numpy as np
5 from scipy.io import arff
6
7 import matplotlib.pyplot as plt
8 import seaborn as sns
9
10 from sklearn.model_selection import train_test_split
11 from sklearn.preprocessing import StandardScaler
12 from xgboost import XGBClassifier
13
14 from sklearn.metrics import roc_auc_score, roc_curve, auc
15 from sklearn.metrics import precision_score, recall_score, accuracy_score,
16 fl_score
17 from sklearn.utils import class_weight
18 from sklearn.metrics import classification_report
19
20 def xgb_model_report(dataNumber, X_tr, y_tr, X_te, y_te, xgbParams, model_name,
21 weights=0, save_model=0, print_report=0):
22     """
23     This is a function to that runs XGBClassifier with the given parameters and
24     print the classification report.
25     Returns to the model.
26
27     dataNumber: # for Data file in use (1, 2, 3, 4, 5)
28     X_tr: training data
29     y_tr: training labels
30     X_te: testing data
31     y_te: testinglabels
32     xgbParams: XGBClassifier parameters used to create the model
33     weights: Bool parameter to use sample_weights or not.
34     save_model: Bool parameter to control saving the model
35     print_report: Bool parameter to control printing the report
36     """
```