```
#Import all necessary Packages

import pandas as pd
import numpy as np
import seaborn as sb
from sklearn.model_selection import train_test_split

#Loading the dataset to a dataframe

tempdf = pd.read_csv("FinalTrainDataset2.csv")
tempdf.head()

#Separating the input features and output label into different variables for
training

x = finaldf.iloc[:,:-1]
y = finaldf.iloc[:,-1]


#Splitting the data for training and testing

X_train , X_test, y_train, y_test = train_test_split(x,y,test_size = 0.15)
len(X_train),len(X_test)

#Import all necessary packages

from sklearn.model_selection import train_test_split
from sklearn.svm import SVC
from sklearn.ensemble import RandomForestClassifier
from sklearn.tree import DecisionTreeClassifier
from sklearn.neighbors import KNeighborsClassifier
from sklearn.naive_bayes import GaussianNB
from sklearn.linear_model import LogisticRegression
from sklearn.metrics import roc_curve, roc_auc_score
import sklearn

#Initializing the classifiers for training, in a list

classifiers = [LogisticRegression(random_state=1234),
               GaussianNB(),
               KNeighborsClassifier(),
               DecisionTreeClassifier(random_state=1234),
               RandomForestClassifier(random_state=1234),
               SVC(probability=True)]

# Creating a dataframe to draw charts based on the results

result_table = pd.DataFrame(columns=['classifiers', 'fpr','tpr','auc'])

# Training all the classifiers in the list
```

```
for cls in classifiers:
    model = cls.fit(X_train, y_train)
    yproba = model.predict_proba(X_test)[::,1]
    y_pred = model.predict(X_test)
    fpr, tpr, _ = roc_curve(y_test,  yproba)
    auc = roc_auc_score(y_test, yproba)

    result_table = result_table.append({'classifiers':cls.__class__.__name__,
                                        'fpr':fpr,
                                        'tpr':tpr,
                                        'auc':auc}, ignore_index=True)
result_table.set_index('classifiers', inplace=True)

#Plotting the metrics of the models in a graph

import matplotlib.pyplot as plt

fig = plt.figure(figsize=(8,6))

for i in result_table.index:
    plt.plot(result_table.loc[i]['fpr'],
             result_table.loc[i]['tpr'],
             label="{}, AUC={:.3f}".format(i, result_table.loc[i]['auc']))

plt.plot([0,1], [0,1], color='orange', linestyle='--')

plt.xticks(np.arange(0.0, 1.1, step=0.1))
plt.xlabel("False Positive Rate", fontsize=15)

plt.yticks(np.arange(0.0, 1.1, step=0.1))
plt.ylabel("True Positive Rate", fontsize=15)

plt.title('ROC Curve Analysis', fontweight='bold', fontsize=15)
plt.legend(prop={'size':13}, loc='lower right')

plt.show()
```