WORKING

This code is a Python script for training a K-Nearest Neighbors (KNN) classifier on a training dataset and evaluating its performance on a test dataset. It performs the following steps:

1. Import the essential libraries, such as Numpy, Pandas, Matplotlib, and Scikit-Learn..
2. Split the train data into features (X) and labels (y), with the features being all columns except the "label" column and the labels being the values in the "label" column.
3. The train data is then divided into train and validation sets (X train, X val, y train, y val), with 20% of the data utilised for validation.
4. Build a KNN classification model for (3,5,7,9,11) neighbours.
5. Using the fit() function, train the model using the training data..
6. Use the predict() method to make predictions on the validation data, and the confusion matrix, accuracy, and F1 score are calculated using the confusion matrix(), accuracy score(), and f1 score() methods.
7. Using the predict() and savetxt() methods, make predictions on the test data and save the predictions to a CSV file "y test pred.csv.".