



Machine Learning Lab - Assignment 8

Group A – Python Program

1. Count tuples occurrence in list of tuples

2. Removing duplicates from tuple

3. Removing duplicates from tuple

4. Consecutive Kth column Difference in Tuple List using loop

Input : test_list = [(5, 4, 2), (1, 3, 4), (5, 7, 8), (7, 4, 3)], K = 0

Output : [4, 4, 2] : Explanation : $5 - 1 = 4$, hence 4.

5. Python program to sort a list of tuples alphabetically

Input: [("Amana", 28), ("Zenat", 30), ("Abhishek", 29), ("Nikhil", 21), ("B", "C")]

Output: [('Amana', 28), ('Abhishek', 29), ('B', 'C'), ('Nikhil', 21), ('Zenat', 30)]

6. Python – Combinations of sum with tuples in tuple list

The original list : [(2, 4), (6, 7), (5, 1), (6, 10)]

The Summation combinations are : [(8, 11), (7, 5), (8, 14), (11, 8), (12, 17), (11, 11)]

7. Python – Convert Tuple to Tuple Pair

Input : test_tuple = ('A', 'B', 'C')

Output : [('A', 'B'), ('A', 'C')]

8. Convert List of Lists to Tuple of Tuples

Input : test_list = [['Best'], ['Gfg'], ['Gfg']]

Output : (('Best',), ('Gfg',), ('Gfg',))

Group B – Program on Classification Algorithm

9. Use the **temperatures.csv dataset**

a) Read all the dataset using a dataframe

b) Apply preprocessing techniques

c) Perform 80-20, 70-30 and 65-35 division for train and test set

d) Apply **Linear Regression classifier** and display Accuracy

e) Generate Confusion matrix

f) Display Precision, Recall, F1-Score , Sensitivity , Specificity , Kappa stat .

g) Generate a bar graph for 3 accuracies obtained

10) Use same dataset in QS 9 and apply preprocessing techniques

a) Apply **Logistic Regression classifier** and display Accuracy for all the divisions

b) Generate a bar graph for 3 accuracies obtained.

c) Generate Confusion matrix

d) Display Precision, Recall, F1-Score , Sensitivity , Specificity , Kappa stat .

e) Generate a bar graph for 3 accuracies obtained

