

Course- B.Tech.	Type- Specialization Core II
Course Code- CSET228	Course Name- Data Mining and Predictive Modelling (Lab)
Year- 2024	Semester- Even
Date- 15/04/2024	Batch- 2022-2025

CO-Mapping

Q(s)	CO1	CO2	CO3
Q1		√	

Objectives

Students will be able to gain understanding of Anova and MLP

1. Read the data 'Diet.csv' which holds the data for 90 people.
 - a) Normalize the 'age', 'height', pre_weight', and 'post weight' on z-scale.
 - b) Perform one-way anova for different diets on the difference of pre_weight and post_weight
 - c) Check whether the F statistics is significant on alpha=.05.
2. Design a feed-forward neural network (also popularly known as a Multilayer Perceptron) classifier using the load digits dataset.
 - a) Load the dataset using load_digits() function and finally store the data in data_and_labels variable. Plot the data using subplot and imshow functions.
 - b) Get the Data in X variable, Target Data in Y variable and Target Names in tar variable.
 - c) Use MLPClassifier function from sklearn.neural_network library . Train the model on 50,000 number of data points.

Kindly use following configuration for the model:

- Input Layer - 7 neurons
- 1 Hidden layer of 3 neurons
- Output Layer - 2 neurons
- Batch Size – 10
- Epoch – 10
- Learning Rate - 0.09
- Activation in Intermediate Layers – ReLu Activation
- Activation in Output Layer – Softmax
- Parameter Initialization – He Normalization