Machine Learning Assignment-1

python

Task 1: Write a Python program to check if a number is even or odd. The program should take an integer input from the user and print whether the number is even or odd. Example: If the user inputs 4, the output should be "4 is even".
Task 2: Write a Python program to find the largest of three numbers. The program should take three integer inputs from the user and print the largest number. Example: If the user inputs 3, 7, and 5, the output should be "The largest number is 7".

Numpy

Task 1: Create a NumPy array of shape (3, 3) filled with random numbers. Then, compute the mean, median, and standard deviation of the array.
Task 2: Perform matrix multiplication using NumPy. Create two 2x2 matrices and multiply them. Print the result.

Matplotlib

Task 1: Create a line plot using Matplotlib. Plot the function y = x^2 for x values ranging from -10 to 10. Label the axes and give the plot a title.
Task 2: Create a bar chart using Matplotlib. Use a dataset of your choice (e.g., sales data, number of students in different classes) and plot a bar chart. Label the bars and the axes.

Seaborn

Task 1: Create a histogram using Seaborn.
Use a sample dataset (e.g., tips dataset) to plot the distribution of a numerical column.
Task 2: Create a heatmap using Seaborn.
Use a correlation matrix of a dataset to create a heatmap. Annotate the heatmap for better readability.