BCSE209P - Machine Learning Lab

Digital Assignment 1

Write a program to perform the following

1. Create a 2D NumPy array of shape 3×43 \times 43×4 filled with random integers between 1 and 100.

   - Extract the second row and the last column from the array.

   - Replace all even numbers in the array with -1.

2. **DataFrame Creation and Basic Operations:**

- Create a DataFrame with columns: "Name," "Age," "City," and "Salary" for 5 employees.
- Add a new column, "Bonus," which is 10% of the "Salary."
- Sort the DataFrame by "Salary" in descending order.

3. Plot a line graph for the equation y=2x2+3x+5y = 2x^2 + 3x + 5y=2x2+3x+5 for xxx ranging from -10 to 10. Label the axes and title the plot.

4. Create a figure with 4 subplots each needs to have title and labeled axes.

- Line graph.
- Scatter plot.
- Histogram.
- Bar chart.