Subject Code	Subject Name	Credits
26CS156	FOUNDATION OF DATA SCIENCE LAB	2

Objective

To build a foundation for data analytics and machine learning, provide hands-on experience in data handling and analysis and to develop programming skills using Python for data science tasks

1. Write a Python program to perform basic arithmetic operations on user input.
2. Write a program to create and manipulate lists, tuples, and dictionaries.
3. Write a Python program to read and write data from a text file.
4. Create a NumPy array and perform operations like reshape, slicing, and indexing.
5. Write a program to compute mean, median, and standard deviation using NumPy.
6. Create a Pandas DataFrame from a CSV file and display summary statistics.
7. Perform data filtering, sorting, and grouping using Pandas.
8. Plot a line graph, bar chart, and histogram using Matplotlib.
9. Create advanced visualizations using Seaborn
10. Write a program to calculate correlation between two variables

Students are required to perform and record at least eight experiments in the laboratory manual as part of the course requirements.

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