School of Computer Science Engineering and Technology

Course- BTech   Type- Core
Course Code- CSEL301   Course Name-AIML
Year- 2022   Semester- Odd
Date- 24-08-2022   Batch- 5th Sem

Lab Assignment No. 2.1

Objective: To use Matplotlib and Seaborn python library to perform exploratory data analysis

Read and load the train.csv file (https://www.kaggle.com/c/titanic/data?select=train.csv) and perform following operations

1. Load titanic dataset into Pandas DataFrame   (5)
2. Display the entries in titanic data   (5)
3. Find out the number of examples of each class passenger.   (5)

Matplotlib is a comprehensive library for creating data visualizations in Python.

4. Plot the following graph using matplotlib library and write the conclusion that which one is best suited for this dataset.
    a. Bar Chat for number of male, female, and mean of fare   (5)
    b. Line Chart   (5)
    c. Multiple line chart   (5)
    d. Histogram and fill the colour   (5)
    e. Box plot for age, fare, and class with different colour   (5)
    f. Scatter plot (2D and 3D) in between age and fare and insert lebels   (5)

Seaborn is a Python data visualization library based on matplotlib. It provides a high-level interface for drawing attractive and informative statistical graphics.

5. Plot the following graph using seaborn library
    a. Display each class with different colours in scatterplot   (5)
    b. Plot the boxplot for individual feature.   (5)
    c. Display boxplot is such a way so that all the points don't fall in single vertical line (5)
    d. Draw a violin plot.   (5)
    e. Draw a kdeplot   (5)
                                                                                        (5)