Faculty of Computer Applications & IT

MID TERM EXAM - 2023

Course Name: MSc (IT)   **Semester: II**

Subject Name: Machine Learning with Python   **Total Marks: 50**

Date: 4/02/2023

Note:

1. Load appropriate data set to your local disk.
2. Check installed version of Python Libraries.
3. Use Data Visualization tool as an when required.

Q.1.	**Perform the below task using "Movie Data Set"**	**50**
1.	Load data set using pandas function and print top 10 record.	5
2	Which movie earns the most and least profit?	5
3	Print movies which have a value of '0' in their budget or revenue.	5
4	Calculate the total Profits made by all movies in year which it released.	5
5	Draw line chart for run time of movie.	5
6	In which year we had the most movies making profits?	5
7.	Print the size and shape of the data set.	5
8.	Remove the duplicate record from the dataset.	5
9.	Count the null values in the data set and fill with the average value.	10

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Q.2.	Perform the below task using "Cars Data Set"	50
1.	Load data set using pandas function and print last 5 record.	5
2	Print the size and shape of the data frame.	5
3	Find the mean price for each brand using the pandas function.	5
4	Count the car having Black color.	5
5	Find which Brand have maximum car in year 2017.	5
6	Create a line chart which shows proportion for each car brand.	5
7	Print the statistical information of the data frame	5
8	Remove all the duplicate values from the data frame	5
9	Count the null values in the database and replace with median value.	10

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Q.3.   **Perform the below task using "Iris Data Set"**   **50**

1.	Load data set using pandas function and print first 4 record.	5
2	Print information of data set.	5
3	Count the values of each class of species.	5
4	Draw a line chart for sepal-length vs sepal-width.	5
5	Print shape and size of the data frame.	5
6	Print all the column header of the data frame.	5
7.	Filter the record from index no 80 to 100.	5
8	Remove all the duplicate values from the data frame	5
9	Count the null values in the database and replace with median value.	10

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Q.4.	**Perform the below task using "flight Data Set"**	**50**
1.	Load data set using pandas function and print last 5 records.	5
2	Print the number of flight from one point to another.	5
3	Find the best airline in terms of departure.	5
4	Create new column speed by calculating speed of airplane using distance and time taken to travel..	5
5	Create a data frame containing total number of flights going to a particular destination.	5
6	Find the size and shape of data set	5
7	Print all the column header of the dataframe.	5
8	Remove all the duplicate values from the data frame	5
9	Count the null values in the database and replace with mean value.	10

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3. Use Data Visualization tool as an when required.

Q.5.	**Perform the below task using "diamonds Data Set"**	**50**
1.	Load data set using pandas function and print last 5 records.	5
2	Draw the bar chart of costliest and cheapest diamonds .	5
3	Draw the chart for Price vs Carat of Diamonds.	5
4	Print the record where either of dimension (x,y,z) is Zero.	5
5	Create a new data frame by multiplying x,y,z.	5
6	Drop all the dimension.(X,Y,Z).	5
7	Print all the Statistical information of the data frame.	5
8	Remove all the duplicate values from the data frame	5
9	Count the null values in the database and replace with mean value.	10