ED5340:Data Science: Theory and practice

LAB 7 : LIBRARIES & OPTIMIZATION - PART B

✔ Done

Opened: Wednesday, 6 March 2024, 3:00 PM
Due: Saturday, 9 March 2024, 11:59 PM

5. WAP to plot a 3-d graph of the helical wave signal using the scatter method and normal line method. Plot them separately and specify legend.

6.

```
countries = {
    "1": {"Country": "New Country 1",
          "Capital": "New Capital 1",
          "Population": "123,456,789"},
    "2": {"Country": "New Country 2",
          "Capital": "New Capital 2",
          "Population": "987,654,321"},
    "3": {"Country": "New Country 3",
          "Capital": "New Capital 3",
          "Population": "111,222,333"}
}
```

Make a data frame using pandas from dictionary of dictionary.

7.

```
StringData = '''Date;Event;Cost
    10/2/2011;Music;10000
    11/2/2011;Poetry;12000
    12/2/2011;Theatre;5000
    13/2/2011;Comedy;8000
    '''
```

Make a data frame using pandas from string.

8.Take a N X M integer array matrix with space separated elements (N = rows and M = columns). Your task is to print the transpose and flatten results using numpy

9. WAP to capitalize a column of names in a Pandas Dataframe.

Eg : Input : {'Name': ['john', 'bODAY', 'aNa', 'Peter', 'nicky'], 'Education': ['masters', 'graduate', 'graduate', 'Masters', 'Graduate'], 'Age': [27, 23, 21, 23, 24]}

Output : {'Name': ['John', 'Boday', 'Ana', 'Peter', 'Nicky'], 'Education': ['masters', 'graduate', 'graduate', 'Masters', 'Graduate'], 'Age': [27, 23, 21, 23, 24]}

10. Use the central difference method to find the first and second order derivatives of the function. Use the following function for testing the result. And also verify the result manually (Write on paper and upload jpg). Refer to section 2.5.1 of "Optimization for Engineering Design: Algorithms and Examples" by KALYANMOY DEB, 2nd edition

f(x) = 3x**2 + 2x

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Submission status

Submission status	Submitted for grading
Grading status	Graded
Time remaining	Assignment was submitted 4 mins 31 secs late
Last modified	Sunday, 10 March 2024, 12:03 AM
File submissions	AM23M22_LAB7_PART2_06_03_2024.py 9 March 2024, 11:51 PM AM23M022_LAB7.pdf 10 March 2024, 12:03 AM
Submission comments	Comments (0)

Feedback

Grade	10.00 / 10.00
Graded on	Saturday, 1 June 2024, 2:44 AM
Graded by	eM ed19b017 M JASWANTH KUMAR

◄ LAB 7 : LIBRARIES & OPTIMIZATION PART A

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