Comprehensive Python course for AI

Exercises 30 && 31

Deadline:2024 15 January
Score: 700

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Exercises 30

Score: 300

Numpy

❖ **Create a 3x3 NumPy array named `matrix` with the following values:**
   [[1, 2, 3],
    [4, 5, 6],
    [7, 8, 9]]

❖ **Calculate the sum of all elements in the matrix.**

❖ **Find the maximum value in the matrix and provide the value and its indices (row and column).**

❖ **Extract the second column of the matrix and provide it as a separate NumPy array.**

❖ **Replace all even numbers in the matrix with -1.**

❖ **Reshape the matrix into a 1D array.**

❖ **Create a new 2x2 NumPy array named submatrix by slicing the matrix (elements 5, 6, 8, 9).**

❖ **Calculate the mean value of all elements in the submatrix and provide the result.**

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Exercises 31

Score: 400

Pandas, Matplotlib

❖ **Analyze the students dataset based on the details taught in our class. (with Pandas and Matplotlib)**

Thanks

Good Luck!

Don't give up on your dreams ☺