A Simple Task for NUMPY:

Dataset under discussion - Sample URL:

https://github.com/ShahzadSarwar10/AI-ML-Explorer/blob/main/USOpen-DataSet/Real_Estate_Sales_2001-2022_GL-Short.csv

It is REAL ESTATE – US data.

TASK:

1. Load above CVS file above, into separate – Array , with NUMPY, following columns
   "Sale Amount",
   "Serial Number"
   "List Year"
   "Town"
   "Assessed Value"

2. Perform following operation on array of ""Sale Amount":
   As identified in theory at notes here:
   https://github.com/ShahzadSarwar10/AI-ML-Explorer/blob/main/Week2/Artificial%20Intelligence%20(Machine%20Learning%20%26%20Deep%20Learning)-Week2-Day4nDay5-Descriptive%20Statistics%20and%20Probability-Notes_Rev1.pdf
   sequentially and one by one- ALL operations like MODE, MEDIAN, SD and Print it.
   ALL Please. Verify that all stats calculation – are covered.

3. Perform following operation on array of "Assessed Value":
   As identified in theory at notes here:
   https://github.com/ShahzadSarwar10/AI-ML-Explorer/blob/main/Week2/Artificial%20Intelligence%20(Machine%20Learning%20%26%20Deep%20Learning)-Week2-Day4nDay5-Descriptive%20Statistics%20and%20Probability-Notes_Rev1.pdf
   sequentially and one by one- ALL operations like MODE, MEDIAN, SD – and Print it.
   ALL Please. Verify that all stats calculation – are covered.

4. Perform following operations on - array of [array of ""Sale Amount"] and [array of "Assessed Value"]
   Addition [via both operator "+" and method "Add"] - Print it.
   Substrat [via both operator "-" and method "sub"] - Print it.
   Mulitply [via both operator "*" and method "multi"] - Print it.

5. Create a "2D array" based on array of [array of ""Sale Amount"] and [array of "Assessed Value"] Print it.

6. Create a "3D array" based on array of [array of ""Sale Amount"] and [array of "Assessed Value"] and [array of "List Year"]

Print it.

7. Iterate the array - of [array of ““Sale Amount”]
   With function of “np.nditer(“
   Print each item.
   Understand it.
8. Iterate the array - of [array of ““Sale Amount”]
   With function of “np.ndenumerate(“
   Print each item.
   Understand it.
9. Use 7 common properties of array - of [array of ““Sale Amount”].
   Ndim , shape , size……..use command 7 in code – print them

10. Slice array of [Question 5, as - “2D array” based on array of [array of “Sale Amount”] and [array of “Assessed Value”]]

    Row : from 3th value to 7th value
    Column: from 2nd value to 4th value

11. Slice array of [Question 5, as - “2D array” based on array of [array of “Assessed Value”] and [array of “Assessed Value”]]

    Row : from 2nd value to 8th value
    Column: from 3rd value to 5th value
12. Learn – what are geometric operation in NUMPY.
    np.sin , np.cos
    apply common 6 to - “2D array” based on array of [array of “Assessed Value”] and [array of “Assessed Value”] , created in Question 5.

Reference code: https://github.com/ShahzadSarwar10/AI-ML-Explorer/blob/main/Week3/Case3-9-zameencom-property-data-By-Kaggle.py

Ask questions, if you have confusions. ASK me, Call me on whatsapp.

Let’s put best efforts.

Thanks