CS422/622- HW 1

In HW1, we will play with data visualization tools: PCA and Boxplot.

- Data:

- MNIST: http://mkang.faculty.unlv.edu/teaching/CS489_689/code1/MNIST_100.csv
- Housing: http://mkang.faculty.unlv.edu/teaching/CS489_689/code1/housing_training.csv

- Task 1: Visualize the MNIST data using PCA. Reduce the data dimension to two or three and plot the data of reduced dimension. Must plot all the data of ten groups (0 to 9). (40 points)

- Task 2: Visualize the columns of K, M, and N in the housing data using Boxplot. (30 points)

- Task 3: Visualize the column of A in the housing data using histogram. (30 points)

You must submit the followings to UNLV WebCampus:

1. MS word file
   - Briefly describe what you have done for the homework assignment.
2. Source code file(s)
   - Must be well organized (comments, indentation, …)
   - **You need to upload the python file (*.py). Don't upload jupyter notebook files**

You must submit the files SEPERATELY. DO NOT compress into a ZIP file. If you fail to provide all required information or files, you may be given zero score without grading.

Grading guideline:

- In Task 1, each data point should indicate its class label (using different colors or text)
- In Task 2, Box plot should show various density of on the data at different values. Otherwise, it is a just box plot.
- In Task 3, histogram should show the distribution of the data in Column A.

Deadline:

The deadline is **11:59pm Wednesday, Feb 15, 2023**. Late assignments will not be accepted.