

HW#1 (due 11:59 pm on Jan 27, Thursday)

Note: Each group submits one Jupyter Notebook via Blackboard.

Problem 1. (5 points) Finish the pre-course survey

In Jupyter Notebook (using the Markdown cell), write a sentence that all members of the team have finished the survey.

Problem 2. (5 points) Install Jupyter Notebook

In Jupyter Notebook, write a sentence that all members of the team have successfully installed the software on their personal computers.

Problem 3. (40 points) Data processing.

```
data1=pd.read_csv("https://raw.githubusercontent.com/wangx346/MAS651/main/customer_lifetime_value.csv")
```

This is a data set from an insurance company investigating customers' lifetime value.

- (1) Display the last 5 records
- (2) Find the number of rows and columns of the data
- (3) Output basic statistics for the numeric columns
- (4) Find the mean and standard deviation of the variable Clv, which denotes customer lifetime value
- (5) Extract the column Education and print the first 7 records
- (6) Group the data using education and name the data set data1_edu
- (7) Calculate the mean of Clv for the grouped data
- (8) Group using two variables Education and Gender, then calculate the mean of Clv
- (9) Make a histogram of Clv