Lecture on "Data visualization skills in Python"

At 6pm to 7:30pm on February 18, 2021, the lecture of "Data visualization skills in Python" of School of Silicon Valley Artisan of USJ broadcasted live online globally. In order to get the best insights from data and get the most benefit from data analysis, we need to combine the two technologies of visual analysis and data visualization-both of which are important and cannot function without each other; they are in common in analyzing and understanding our data, in practice, we can also use the insights revealed by these visualizations to formulate successful future strategies for the company. The following are the main points summarized by Yuting. Please take notes.





- I. The review of lecture of "Data visualization skills in Python"
- (1) Classification of visualization views
 - a. Categorize them according to the relationship between variables, which are comparison, connection, composition, and distribution.
 - b. Divide according to the number of random variables, such as univariate analysis and multivariate analysis.
- (2) Selection and application of visualization attempts
 - a. The scatter plot, which displays the values of two variables in two-dimensional coordinates, is very suitable for showing the relationship between the two variables.
 - b. A line chart can be used to show the trend of data changes over time.

- c. Histogram, which divides the abscissa into a certain number of small areas, which are also called "boxes", and then use rectangular bars in each "box" to show the number of boxes in the box (That is, the y value), which completes the visualization of the histogram distribution of the data set.
- d. The bar graph (horizontal histogram) can help us view the characteristics of the category.In a bar chart, the length of the long bar represents the frequency of the category, and the width represents the category.
- e. Box plots can help us analyze the differences, dispersion, and outliers of the data.
- f. Heat map, called heat map in English, is a matrix representation method in which the element values in the matrix are represented by colors, and different colors represent values of different sizes. Through the color, you can intuitively know the magnitude of the value at a certain position.



II. Lecture Content

- 1. Two libraries dedicated to visualization in python (matplotlib, seaborn)
- 2. Different categories of visualization views
- 3. Select the corresponding visualization view for the specific scenario and the function needed when using it in python
- 4. Summary

III . Lecturer

School of Silicon Valley Artisan of USJ Instructor: Yuting

(Master of Statistics from San Jose State University, proficient in Python, currently working in Gosvea, Inc Big Data Analysis group)

IV. Organizer

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