

통계분석

Statistical Analysis

Assignment 01.

Descriptive Statistics

Dataset : California House Prices

In the lecture, we have used a dataset of “Titanic: Machine Learning from Disaster.” in order to practice visualization (matplotlib) and statistical modules (scipy.stats). In this assignment, we will use a different dataset to practice visualization (matplotlib) and statistical modules (scipy.stats). The dataset is about “California House Prices.”

You can add this dataset to a kaggle notebook by searching “USTAI_CALIFORNIA_HOUSE” or by using the URL <https://www.kaggle.com/datasets/sjatust8/ustai-california-house>.

notebookb3602b4683

File Edit View Run Add-ons Help

+ Run All Code ▾

● Draft Session off (run a cell to start)

```
# This Python 3 environment comes with many helpful analytics libraries installed
# It is defined by the kaggle/python Docker image: https://github.com/kaggle/docker-python
# For example, here's several helpful packages to load

import numpy as np # linear algebra
import pandas as pd # data processing, CSV file I/O (e.g. pd.read_csv)

# Input data files are available in the read-only "../input/" directory
# For example, running this (by clicking run or pressing Shift+Enter) will list all files under the input directory

import os
for dirname, _, filenames in os.walk('/kaggle/input'):
    for filename in filenames:
        print(os.path.join(dirname, filename))

# You can write up to 20GB to the current directory (/kaggle/working/) that gets preserved as output when you create a version
# You can also write temporary files to /kaggle/temp/, but they won't be saved outside of the current session
```

+ Code

+ Markdown

Share

Save Version 0

Add Data

USTAI_CALIFORNIA_HOUSE

Your Datasets

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CSV

Your Notebooks

1 Data Sources

Relevance ▾



USTAI_CALIFORNIA_HOUSE

sjatust8 · Updated 1y ago

1 Upvotes · CSV · 767 kB



1

Dataset : California House Prices

You can read a file “california_house.csv” by using the Pandas module as shown below.

STAT-Assignment01 Draft saved

File Edit View Run Add-ons Help

+ Run All

Code

Draft Session (3m)

HDD CPU RAM

[2]:

import pandas as pd

[3]:

data = pd.read_csv('/kaggle/input/ustai-california-house/california_house.csv')

[4]:

data

[4]:

	Unnamed: 0	MedInc	HouseAge	AveRooms	AveBedrms	Population	AveOccup	Latitude	Longitude	MedHouseVal
0	0	8.3252	41.0	6.984127	1.023810	322.0	2.555556	37.88	-122.23	4.526
1	1	8.3014	21.0	6.238137	0.971880	2401.0	2.109842	37.86	-122.22	3.585
2	2	7.2574	52.0	8.288136	1.073446	496.0	2.802260	37.85	-122.24	3.521
3	3	5.6431	52.0	5.817352	1.073059	558.0	2.547945	37.85	-122.25	3.413
4	4	3.8462	52.0	6.281853	1.081081	565.0	2.181467	37.85	-122.25	3.422
...
20635	20635	1.5603	25.0	5.045455	1.133333	845.0	2.560606	39.48	-121.09	0.781
20636	20636	2.5568	18.0	6.114035	1.315789	356.0	3.122807	39.49	-121.21	0.771
20637	20637	1.7000	17.0	5.205543	1.120092	1007.0	2.325635	39.43	-121.22	0.923
20638	20638	1.8672	18.0	5.329513	1.171920	741.0	2.123209	39.43	-121.32	0.847
20639	20639	2.3886	16.0	5.254717	1.162264	1387.0	2.616981	39.37	-121.24	0.894

20640 rows × 10 columns

Notebook

Data

+ Add Data

Input

ustai-california-house

california_house.csv

Output (60KB / 19.5GB)

/kaggle/working

Models

Notebook options

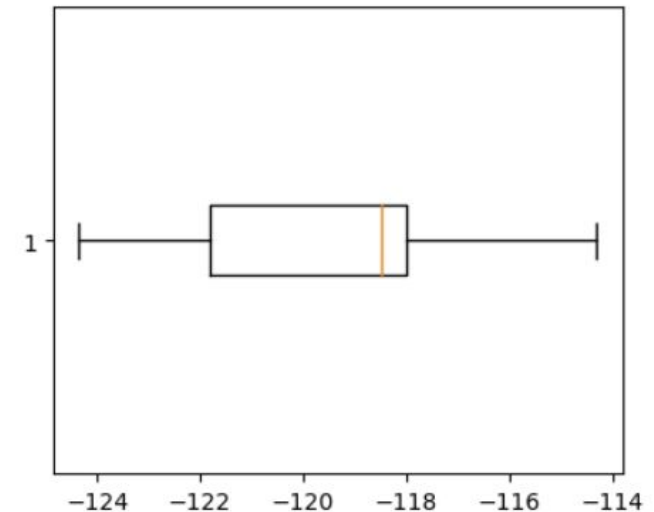
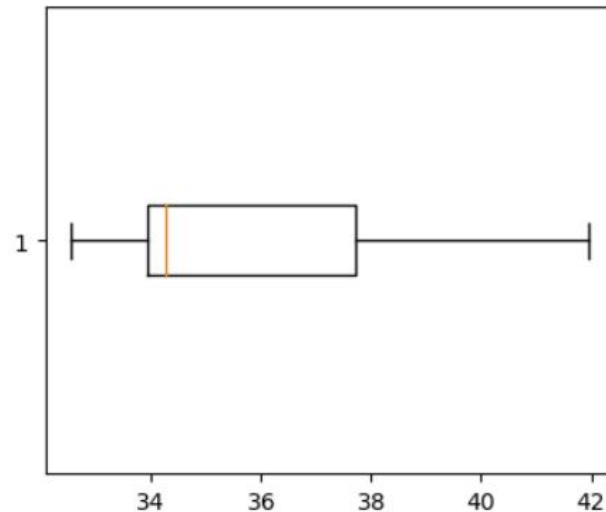
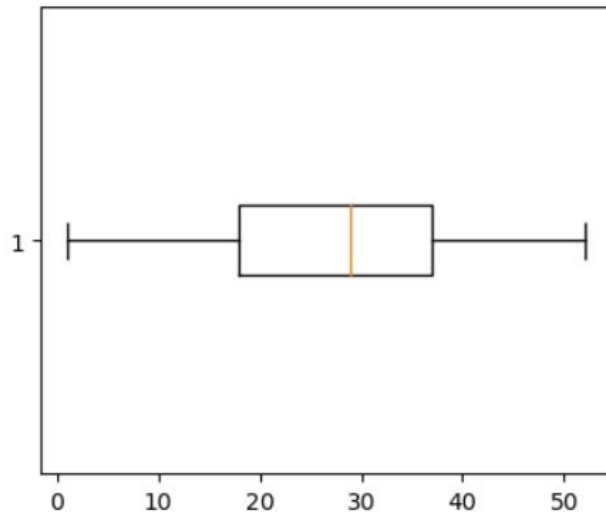
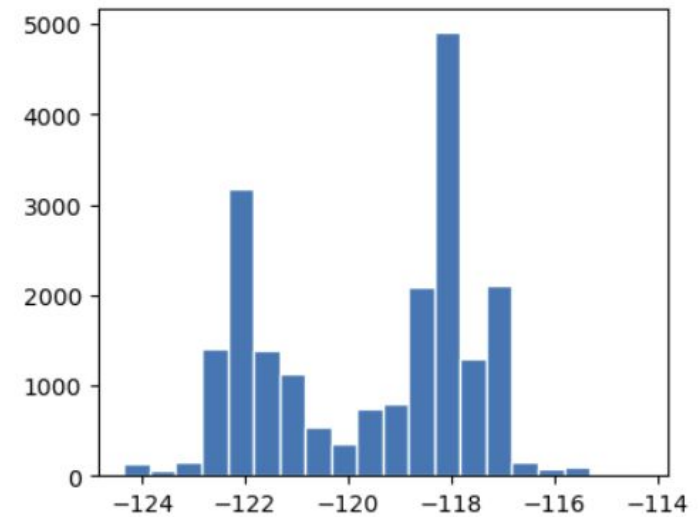
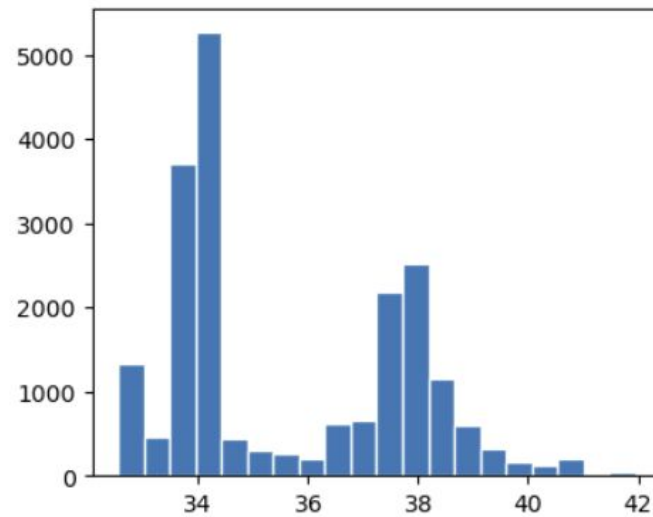
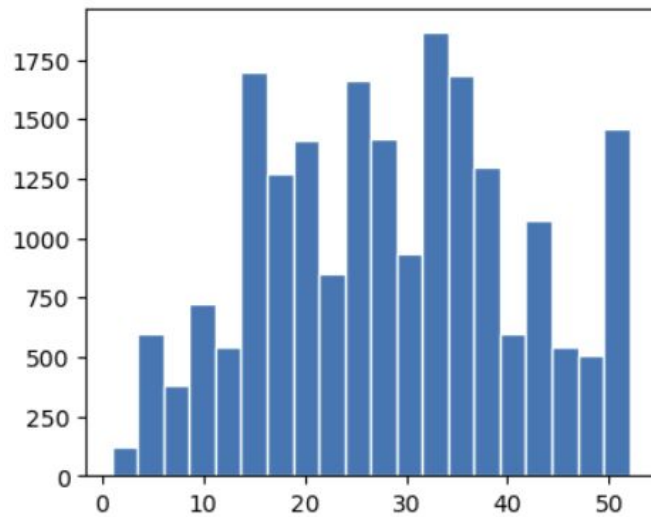
Schedule a notebook to run

Code Help

Find code help

Q1. Drawing Multiple Subplots

For three columns, “HouseAge”, “Latitude”, and “Longitude”, plot the following multiple subplots consisting of histograms and boxplots.



Q2. Calculating Skewness and Kurtosis

For columns from “MedInc” to “MedHouseVal”, calculate skewness and kurtosis. Which column is the most asymmetric? Which column is the sharpest?

Submissions

- Please write down your kaggle notebook file to answer Q1 and Q2. Make a Python code to answer Q1 and Q2, and submit your kaggle notebook file to <https://class.ust.ac.kr>.
- Due date is 2023. 04. 12.

4Week [22 March - 28 March]



STAT-LEC03-PROBABILITY01



STAT-LEC03-PROBABILITY02



Assignment 01

Assignment 01

Please read the attached file and submit your notebook to solve Q1 and Q2.



STAT_ASSIGNMENT01 20230329.pdf

Submission status

Submission status	No attempt
Grading status	Not graded
Due date	2023-04-12 23:55
Time remaining	14 days 15 hours
Last modified	-
Submission comments	► Comments (0)

Add submission