#### **ISM 370**

## **Module 3 Project**

### Requirements

Project Name	Flagstaff Home Prices	
Project Due Date	Sunday by 11:59pm	

#### Requirements

For this project, you will submit two files. One is a Word document with information about your approach and analysis. The second is your python project file that includes the code you used to explore the data. For this project, you will work with a dataset that lists the median home prices for each month for Flagstaff for the past 26 years. The data includes variables for MONTH, YEAR, and PRICE (price represents the median sales price for the month).

#### Requirements:

- 1. Read in the flagstaff\_real\_estate.csv into your Python project. Print the header.
- 2. Imagine that you are involved in the business of real estate or that you are considering expansion or investment in Flagstaff. In your Word document, list number 1 and write down something about home prices in Flagstaff that you would like to learn from this data.
- 3. Print the descriptive statistics using the describe() function or the individual descriptive functions. Additionally, print the overall median home value price. In your Word document, list number 2 and write down at least three facts you learned from the descriptive statistics.
- 4. Use the groupby function to view the median home price for each year (group by year). In your Word document, list number 3 and write down at least two facts you learned after grouping the prices by year.
- 5. Use the .loc method to take a subset of the data that only includes the years 2010-2019. Generate descriptive statistics for this subset. Use the groupby function on this subset to view the median home price for each year (group by year). Use the groupby function on this subset to view the median home price for each month (group by month). In your Word document, list number 4 and write down at least five facts you learned after analyzing this subset of data.
- 6. In your Word document, list number 5 and answer this question: At this point have you produced the facts and information you need to learn what you hoped to learn in number 2 above (the thing you identified in number 1 in your Word document? If so, explain what you learned and reference the data (facts) that gave you this information. If not, identify what other data you would need or what else you may need to do to learn that information. If it can be done with this dataset and the tools you currently have, complete that analysis to obtain that information.
- 7. In your Word document, list number 6 and write a brief summary of the key things you learned (insights obtained) from the data and your analysis.

#### Grading

Completing both the analysis and the writing requirements completely and well are necessary to earn high marks on this project. Deficiency in either will result in lower marks. You are welcome to add additional functionality and to utilize your creativity in making the program even better.

# Deliverable

Submit your Word document and your Python file to Canvas.