London Answers

What did you find? Which borough is the most expensive? Any other interesting trends?

- Kensington & Chelsea is the most expensive borough. It has always been the most expensive borough.
- Barking & Dagenham is the least expensive borough and always has been.

How did you arrive at your conclusion?

- I first created a bar graph with one bar per borough to show the average home price. This gave me a very rudimentary and high-level understanding of what the data on my line graph may resemble.
- Then, I plotted the average home prices over time for all 32 boroughs on a single graph to compare them.
- From there, I wrote a function to calculate the ratio of 1998 average home prices to 2018 average home prices by borough. I saved the ratio for each borough in a dictionary.
- I also wrote functions to save the average home price in 1998 and 2018 to respective dictionaries.
- I compared the results of my graph to the results of my functions. The line for Kensington & Chelsea is significantly higher on the y-axis than the other boroughs, and the results of my functions also indicate that the average home price in 1998 and the average home price in 2018 are the highest out of all the boroughs.

What were the main challenges you encountered? How did you overcome them? What could you not overcome?

- When I tried changing the column names, I didn't know that NaT is part of pandas. I kept calling it a column name, so until I figured that out, I was a little stumped.
- Plotting the lines for each borough on a single graph was challenging. I still don't have the perfect solution, but I got all 32 lines on one graph. It is hard to distinguish between each line, and the colors repeat, which makes it hard to draw conclusions from the graph alone. I ended up plotting the boroughs individually to distinguish between those with matching colors.

Is there anything you'd like to investigate deeper?

- I want to investigate lambda functions. I didn't use a lambda function to make my 'Year' column, so I want to study lambda functions in other contexts to make sure I understand them.
- I want to investigate matplotlib/visualizing data more. I think there are probably better ways to visualize this data, and I would love to explore more options.

- Notes:
  - https://plotly.com/python/getting-started/
  - https://plotly.com/examples/dashboards/