**Thanh\_Nguyen\_London\_Answers**

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

Assuming the question is what London borough has the highest price increase from 1998/01/01 to 2018/01/01?

The highest price increases are 560%, 544% and 521% of Hackney, City of London, Westminster. Note "City of London" is not one of the boroughs.

*2) How did you arrive at your conclusion?*

1. Assume we invest 100 dollars in the housing market of each borough and assume our 100 dollars grow at the same rate as the average housing price in the borough. The value of our initial 100 dollars in any month t is calculated with the following formula:

Value of 100 dollars at time t = (100 \* average house price at month t)/(average house price at 1998/01/01).

1. Given the timeseries of value of 100 dollars, we can create the graph as reported in the notebook or as below. Note we can choose any two boroughs to draw such graph.

Chart

Description automatically generated

1. In 2018/01/01, the borough with the highest value of our 100 dollars is the one that has the highest price increase. Borough "Hackney" has the highest price increase. Our hypothetical 100 dollars would grow to 660 dollars from 1998 to 2018; that is 560% price increase.

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

- Column (or variable) “average price” has values of both numerical and string types; and the string values are not counted as missing.

- This contradicts what I know about DataFrame that one column has only one type of data.

- This issue makes it hard to inspect the data for missing values (i.e. non-numerical value).

- I have not overcome this challenge.

*4) Is there anything you’d like to investigate deeper?*

- What borough(s) seem to lead in term of housing price increases?

- What effects of housing price increase on homelessness (this needs more data)?