Analysis of Los Angeles public sector salary vs housing

Hypothesis: The salary increase of the public sector is proportional to the increase of the housing price in LA.

Dataset for the study:

* Ds1 - Los Angeles salaries for public sector (Kaggle)
* Ds2 - Housing prices in Los Angeles (Redfin)

Clean up process Ds1

* Using Jupyter file to read and import the dataset
* 285,000 rows
* Dropping all the NaNs located in the column named “Total Payments”
* Converting the formatting of symbols to floats to perform further analysis on those data points
* Grouping by department tittle
* Dropping all the zeros located in the columns named “Q1, Q2, Q3, and Q4” (including 2016)
* Creating a histogram to visualize how the dataset is distributed and eliminating the outliers by filtering for total payments between 0 to 300,000.
* Filtering by department title with records more than 10,000 provided us the top 6 Departments:

1. Police
2. Fire
3. Airport
4. Public works
5. Water and Power
6. Recreation and Parks

* An analysis was conducted per department by comparing:
  1. Total Payments vs Average Benefit cost by job class tittle (top XX)
  2. Base Pay vs Total Payments by job class tittle (top XX)
  3. Percentage increase in base pay over years (above XX)
  4. Percentage increase in average benefit cost over years (above XX)
  5. Analyzing the fire department percentage increase in Total payments and base pay vs housing percentage price increase for 2013 to 2015.
  6. Calculating the correlation coefficient between housing increase vs base pay increase and total payment increase.