New York Median Housing prices clustering

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"Buying a home wouldn't make much sense if house prices were likely to decline further; no one wants to catch a falling knife.."

MARK ZANDI

A.Introduction/ Problem

A description of the Business problem

Many of us were told that house prices are so high because there are too many people and not enough houses. While this is true, house prices have also been pushed up by the hundreds of billions of new money that banks created in the years before the financial crisis.
Housing prices important indicators of inflation and GDP and it important from who want to make new investments in real estates and from want to purchase a new property and also who want to sale his property all of them have the same problem and want to know the price of house in specific neighborhood

2- A description of the data

I used the median sales price of real estate of New York City Neighborhoods to try to solve this problem by clustering the prices to 3 levels

1- High prices

2-Medium Prices

3-low Prices
to help the target audience for a correct decision

B.The Data

3- the data consist of 5 features

(Borough-Neighborhood-Latitude-Longitude-Median Sale Price) Of New York City

4-Source of data:

https://www.propertyshark.com/mason/market-trends/NYC

5- Target Audience

1-   Investors in Real estate in NY

2-   Seller Housing in NY

3-   Buyer Housing In NY

C. Methodology

6- Exploratory data analysis Using Histogram with 3 bins to show distributions of Median Housing Price and showing its skewed to right that's mean is the low prices is most in many neighborhoods then medium then high prices
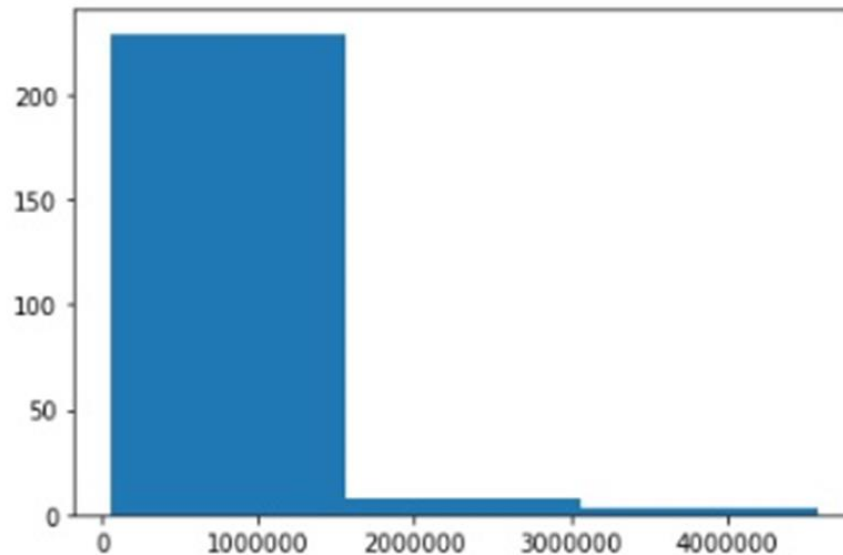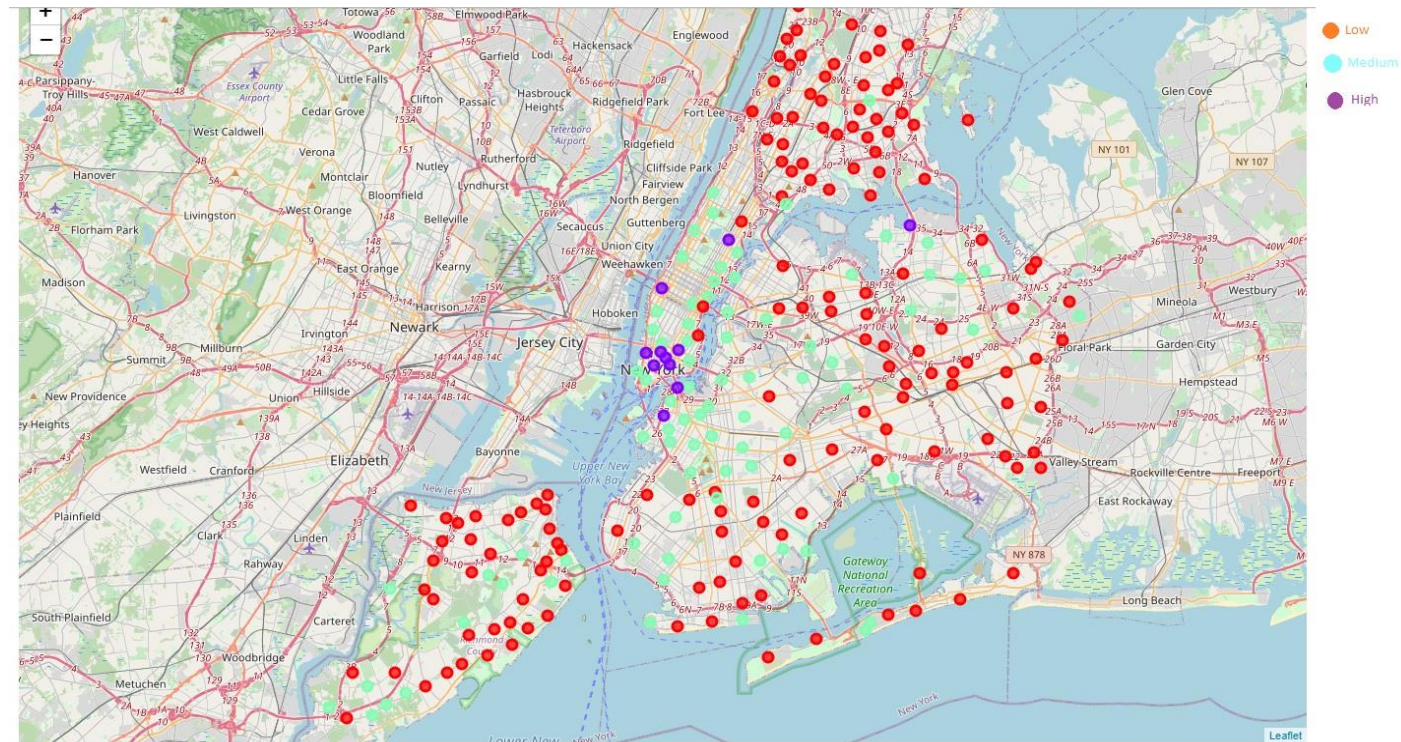
7- Machine Learnings

Using Algorithm 'K-Mean' clustering to clusting the Median prices of neighborhood in 3 sections
High – Medium – Low

E. Discussion section

There is one observation

Low prices: from 10000 to 1000000 approximately

Medium Prices: from 1000000 to 2000000 approximately

High Prices: from 2000000 to 4000000 approximately

F. Conclusion

The study distributes New York city Neighborhoods to 3 section Based on Median Housing Price to High – Medium – low

1-High prices: Consist of 11 Neighborhood

2-Medium Prices: Consist of 80 Neighborhood

3-low Prices: Consist of 149 Neighborhood

And this shape explain it

This is end of this report